INTERNATIONAL HYDROGRAPHIC BUREAU




# REPORT OF THE PROCEEDINGS

OF THE

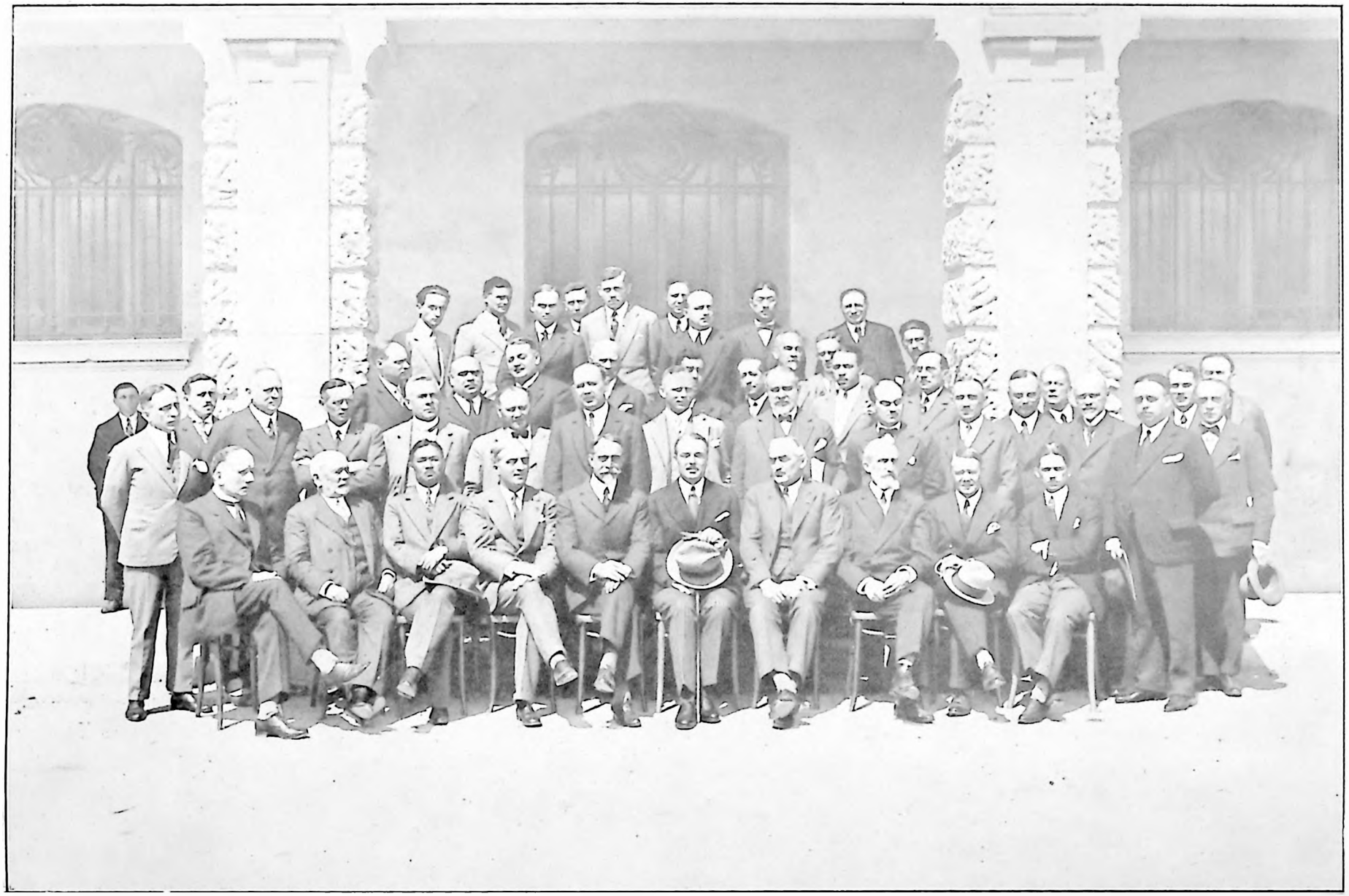
## First Supplementary International Hydrographic Conference

held at Monaco,

9-20 April 1929

Imprimerie Monégasque
Monte-Carlo

Price : 2,50 Dollars



# REPORT OF PROCEEDINGS
OF THE
# FIRST SUPPLEMENTARY
# INTERNATIONAL HYDROGRAPHIC CONFERENCE

# COMPTE RENDU
DE LA
# PREMIÈRE CONFÉRENCE HYDROGRAPHIQUE
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FIRST SUPPLEMENTARY INTERNATIONAL HYDROGRAPHIC CONFERENCE

# FIRST SUPPLEMENTARY INTERNATIONAL HYDROGRAPHIC CONFERENCE

## MONACO 1929



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21. Commander PARKER (U. S. N.).
22. Commander KURZE (Germany).
23. Stenographer.
24. [illegible] (Denmark).
25. Captain ROMAGNA-MANOIA (Italy).
26. Stenographer.
27. M. MORGAN (I. H. B.).
28. Stenographer.
29. Dr. RAUSCHELBACH (Germany).
30. Lieutenant-Commander LOPES (Portugal).
31. Ingénieur-hydrographe en Chef GOT (France).
32. Captain BAUM (U. S. A.).
33. Youbashi EL SAYED HAMZA EFFENDI (Egypt).
34. Lieutenant-Commander ESTRADA (Spain).
35. Captain HOOYKAAS (Netherlands).
36. Lieutenant-Commander DAY (Great Britain).
37. Lieutenant-Commander YORGOULIS (Greece).
38. Commander SAILLANT (France).
39. M. E. MARTIN (I. H. B.).
40. M. J. BOWLES (I. H. B.).
41. Lieutenant-Commander BENCKER (I. H. B.).
42. M. R. AUBERT (I. H. B.).
43. Lieutenant SLIWERSKI (Poland).
44. Commander BEEHLER (I. H. B.).
45. Professor TENANI (Italy).
46. Commander MIURA (Japan).
47. M. F. BUTAVAND (Monaco).
48. M. HERBERT, interprete.

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OF THE
# FIRST SUPPLEMENTARY
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DE LA
# PREMIÈRE CONFÉRENCE HYDROGRAPHIQUE
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3, Avenue du Port

Principauté de MONACO

(Europe)

INTERNATIONAL HYDROGRAPHIC BUREAU




# REPORT OF THE PROCEEDINGS

OF THE

## First Supplementary International Hydrographic Conference

held at Monaco,

9-20 April 1929

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# INTRODUCTION

As decided by the Conference in its Meeting on 9th April 1929, the Reports of Proceedings of the Plenary Sessions and of the Committee Meetings have been briefly summarized.

They have been corrected in accordance with the indications furnished by the Delegates after distribution of the minutes during the session.

The agreement of the French and English texts has been checked by the INTERNATIONAL HYDROGRAPHIC BUREAU.

In view of the numerous references made during the course of the debates to the pamphlet called " Proposals of the States-Members and of the Directing Committee of the Bureau to be discussed at the First Supplementary International Hydrographic Conference of 1929 ", the contents of this pamphlet have been reproduced in full in the present Report of Proceedings, and the numbering of the pages of the original pamphlet distributed to the Members has been marked in the margin.

The text of the new proposals made during the Conference and followed up by the Conference has been included.

In order to facilitate the reading of the Minutes, when reference to the various paragraphs of the " Proposals " becomes too frequent, the passages quoted are inserted in the text itself of the Report of Proceedings. The same also applies to certain paragraphs of the Reports on Commissions which were subjected to discussion during the Plenary Sessions.

# PREFACE

The Second International Hydrographic Conference which met at Monaco in October - November 1926 took the following resolution : —

> " That a Supplementary Conference should take place in the Spring of 1929, i. e. two and a half years after the present Conference, to which would be referred the examination of all the questions the full discussion of which has not been possible now, and also the questions which may arise in the interval.
>
> " The Directing Committee should provide for the cost of this Conference by reducing the expenses in other directions.
>
> " The Heads of the Hydrographic Offices and their Assistants should attend this Conference if possible."

Such Supplementary Conferences are provided for by Article 50 paragraph (a) of the Statutes, which reads : —

> " A Supplementary Conference may be held at any time if the majority of the Members, either on the initiative of one of them or on that of the Directing Committee of the Bureau, considers this necessary. "

A Supplementary Conference involves no elections for a new Directing Committee and Secretary-General as is the case with the Statutory quinquennial Conferences. This is laid down in the Statutes by paragraph (b) of Article 50 : —

> " These Supplementary Conferences will not involve any change in the Directing Committee or of the Secretary-General, unless this subject is specially brought forward for consideration. "

The last paragraph of the resolution quoted above was made in reference to Article 53, paragraph (b) ; viz : —

> " At Supplementary Conferences the number and qualifications of the Delegates will depend upon the object or objects for which the Conference is convoked. "

The objects for which the Conference was convened are set out in the first paragraph of the resolution of the 1926 Conference.

The Directing Committee of the International Hydrographic Bureau suggested that the Supplementary Conference should be held early in April and that States Members of the Bureau, only, should be present. The States Members having agreed to these proposals, it was decided to open the Conference on Tuesday 9th April 1929.

As for the Second International Hydrographic Conference of 1926, it was necessary to hire a hall in which the Plenary Sessions could meet. Thanks to the Lecture Society of Monaco, of which M. LÉON H. LABANDE, Custodian of Archives and Councillor of State, is the Chairman, the Bureau obtained the use of the Lecture Hall on the Quai de Plaisance on very advantageous terms. In this connection mention must be made of the kind assistance in arranging details rendered by the Secretary of the Society, M. PAUL DE VILLENEUVE, Councillor of the Court of Appeal.

The meetings of some of the Committees set up by the Conference were held at the offices of the International Hydrographic Bureau.

H.S.H. PRINCE PIERRE OF MONACO kindly consented, once again, to preside at the Opening Meeting, which was held at 10.00 on 9th April 1929.

H.S.H. the SOVEREIGN PRINCE OF MONACO showed His interest in the Conference by attending this meeting, at which were present also the Members of the MONEGASQUE GOVERNMENT, the CONSULAR REPRESENTATIVES of the States Members and other notabilities.

On account of indisposition, Rear-Admiral ALBERT P. NIBLACK, President of the Directing Committee of the Bureau, was unable to be present at the meetings of the Conference. Ingénieur Hydrographe Général P. DE VANSSAY DE BLAVOUS and Captain L. TONTA, Members of the Directing Committee, attended the Plenary Sessions and the meetings of the various Committees in order to express to them the views of the Directing Committee

At the Opening Meeting Ingénieur Hydrographe Général Pierre DE VANSSAY DE BLAVOUS, Member of the Directing Committee, greeted Their Serene Highnesses and the Delegates and briefly outlined the progress made in the science of hydrography and the objects of the International Bureau, then, having thanked Their Serene Highnesses for the interest shown in the Conference, he invited Prince PIERRE to open its proceedings. Prince PIERRE, having welcomed the Delegates, expressed regret for the enforced absence of Admiral NIBLACK and mentioned that the Foundation Stone of the new Offices of the Bureau would be laid during the Conference, paid tribute to the work of the Bureau and the Conferences and finally declared the First Supplementary International Hydrographic Conference open. Ingénieur Hydrographe Général DE VANSSAY replied thanking Their Serene Highnesses for the valuable gift which They are making to the States Members in providing new offices for the Bureau free of charge and added that a proposal had been made by several Delegations that the annual contribution towards the upkeep of the Bureau, which Monaco now makes, should be waived.

## DELEGATIONS

| States | Number of Delegates |
|---|---|
| ARGENTINE | 2 |
| BRAZIL | *not represented* |
| BRITISH EMPIRE (Great-Britain & Australia) | 2 |
| CHILE | 1 |
| CHINA | *not represented* |
| DENMARK | 1 |
| EGYPT | 2 |
| FRANCE | 3 |
| GERMANY | 3 |
| GREECE | 2 |
| ITALY | 2 |
| JAPAN | 3 |
| MONACO | 2 |
| NETHERLANDS | 2 |
| NORWAY | 1 |
| PERU | 1 |
| POLAND | 1 |
| PORTUGAL | 1 |
| SIAM | *not represented* |
| SPAIN | 2 |
| SWEDEN | 1 |
| UNITED STATES OF AMERICA | 3 |
| *Total :* *19 States* | *35 Delegates* |

The first Plenary Session was held after lunch on the 9th April 1929. Rear-Admiral W.S. CROSLEY (U.S.A.) and Ingénieur Hydrographe Général E. FICHOT (France) were elected President and Vice-President of the Conference respectively. Commander G. SPICER-SIMSON (Secretary-General of the I.H.B.) was elected Secretary-General of the Conference. M. FICHOT was recalled to Paris on urgent official business on 13th April and thus thereafter took no further part in the proceedings.

At the suggestion of the Directing Committee of the I. H. B. four Committees were formed to examine respectively the new questions and proposals dealing with : —

I. Charts,
II. Technical Documents,
III. Finance,
IV. Work of the Bureau.

The two latter Committees had but a small number of members but the two former were fairly large committees on which most of the Delegations were represented.

The reports of these Committees were submitted to the Conference in Plenary Session.

Questions and proposals which had been examined by Committees of the Second International Hydrographic Conference of 1926, and all subjects connected with the Statutes and Administration of the Bureau, were dealt with directly by the Conference in plenary session.

H. S. H. PRINCE PIERRE continued to show His interest in the work of the Conference and honoured it by attending the Plenary Session held during the forenoon of 18th April.

The Plenary Sessions lasted 30½ hours and the Committees sat for a total of 19 hours (some simultaneously), viz : —

| | | |
|---|---|---|
| Committee on Charts..... | 7½ | hours. |
| Committee on Technical Documents..... | 3 | » |
| Committe on Finance ..... | 5½ | » |
| Committee on Work of the Bureau..... | 3 | » |

During the Supplementary Conference two interesting lectures were delivered : —

(1) Echo-Sounding (by Prof. Maurer), read by Captain Claussen at 18.00 on 12th April.

(2) Some results of Experiments in Chart-Printing, from Copper Plates delivered by Commodore Reinius at 18.00 on 17th April.

The texts of these two lectures are given on page 395 *et seq.*

The Delegations of France, Germany, Greece, Japan, Portugal and United States of America distributed documents (see list page 413) to the Delegates and other Delegations brought memoranda of interest to the Members.

An Exhibition of Instruments was held during the session of the Conference. For this the Société des Bains de Mer of Monaco kindly lent a suitable hall to the Bureau. A list of the instruments exhibited is given on page 417.

The Closing Session of the Conference was held during the forenoon of Saturday, 20th April 1929.

In the afternoon of the same day, H.S.H. Prince LOUIS II, Sovereign Prince of Monaco, laid the Foundation Stone of the new offices of the International Hydrographic Bureau which are so generously being presented by the Government of Monaco. A description of this ceremony will be found on page 391.

On 11th April, THEIR SERENE HIGHNESSES gave a Garden-Party at the Palace, in honour of the Delegates, to which were invited the notabilities of the Principality and its neighbourhood.

On Saturday, 13th April, the Conference Hall being required for other purposes, the Bureau organised an excursion to Sospel to which the Delegates were invited to bring the members of their families who had accompanied them to Monaco. Lunch was taken at Sospel.

In the evening of 16th April the Delegates were invited to a performance at the Monte Carlo Theatre.

The BARONESS ORCZY kindly gave a reception and dance in honour of the Delegates at her residence, Villa Bijou, on 18th April.

On Saturday, 20th April, after the ceremony of laying of the Foundation Stone, the Bureau invited the Delegates and all who had shown them hospitality during their stay in Monaco, to a Thé-dansant at the Grand Hôtel. Their Serene Highnesses the Sovereign Prince and Prince Pierre graciously attended this entertainment.

# OPENING MEETING

HELD AT 10.00 A.M., ON 9th APRIL 1929

under the Presidency of

H. S. H. PRINCE PIERRE OF MONACO.

---

## SPEECH

BY

INGÉNIEUR HYDROGRAPHE GÉNÉRAL P. DE VANSSAY DE BLAVOUS

Your Serene Highnesses,
Delegates to the Conference,
Ladies and Gentlemen,

It is not upon me that the honour should have fallen of welcoming the Delegates of all the States Members of the International Hydrographic Bureau and of thanking Your Serene Highnesses for having been kind enough to be present at this meeting, and to honour it by accepting the position of Honorary President and by opening our Conference. The illness of Admiral Niblack deprives us of the presence of the active and conscientious President of the Directing Committee. I am sure that I speak for everyone here in extending to him our best wishes for a speedy recovery, in order that he may resume the work for which his long Naval experience has so ably fitted him.

He would have been much better able than an inexperienced orator like myself to welcome the Members of this Conference, to express our wishes for a satisfactory result of our labours and also our thanks to the Prince who is offering the International Hydrographic Bureau His generous hospitality, causing offices to be built ideally suited to its work and definitely fixing the seat of the Bureau amid the delightful suroundings of His charming Principality.

He carries on the great work of His Father, the lamented Prince Albert I who, entirely devoted to Marine subjects, after dedicating His life to the study of such phenomena, created an Oceanographic Institute at which they might be studied and left behind Him an imperishable reminder of His work in the imposing Museum whose unique collection attracts the learned of the whole world.

The Science, which has brought together such a distinguished gathering today, has exactly the same aim; the study of the Sea, with the object of rendering Navigation easier and safer, to facilitate communication and travel among the Nations, and, as the Sea belongs to all countries, as vessels of all Nations ceaselessly plough the waves, as its harbours give shelter to every flag, the general desire for International Solidarity and the need for International Goodwill have given birth to this Bureau. Twenty-two States have already joined; I trust that we shall have the pleasure of seeing others adhere to it. Charts and other Hydrographic documents of one nation are made use of by all; there is in their use a common interest which connotes the need for collaboration in their standardisation, their translation, their easy accessibility to all; and it is this collaboration, founded on common sense and freely accepted which is the principal object of these Conferences.

But from this collaboration other important advantages should result. The art of Hydrographical surveying, like all other sciences, and dependant on their progress, does not

remain stationary. It is constantly progressing and must continue to do so. Indubitably the seaman of today may no longer hope for

"The chance to be the first to plough
New Seas with cumbrous caravel's bow"

He can only pay homage to the names of those great Navigators and Explorers who were also great surveyors: of such as Bougainville, Cook, Lapérouse, whose discoveries have widened our knowledge of the coasts of the continents and also of the Earth itself. We no longer live in such stirring times; owing to the work of all, the world has become amazingly small; but the great vessels which now plough the seas so swiftly can no longer be satisfied with charts possibly a hundred or a hundred and fifty years old. They must be able to enter harbour at all times and at all hours of the day or night without fear of treacherous rock or hidden bank which endanger the treasures and, above all, the lives which are unhesitatingly confided to their charge.

For this reason the labours of the Nautical Surveyor should never cease. We must pay a just tribute of admiration to Cook, surveying in six months 2.400 miles of coast line in New Zealand, in four months 2.000 miles of coast line on the East coast of Australia and preparing what, for those days, were excellent charts produced with an eminently practical object in view and, at the same time, in a highly scientific spirit. He introduced new methods, studied the tides of the Pacific, of a type then unknown, and made use, for the first time, of chronometers for obtaining a longitude; a short time later, Beautemps Beaupré and d'Entrecasteaux made use, for the first time in nautical surveying of the subtended angle, the use of which was to become so indispensable to Hydrographical Surveying.

All their charts, however, have had to be remade on a more accurate basis and in a less hurried manner. Besides, our world is always undergoing alteration, mountains coming down to the sea and little by little filling up the deeps. Surveys, however accurate, have, in certain areas, to be periodically remade; in other parts they must be elaborated in order to meet present day requirements. Very little is known even now of many coasts, and one must navigate near them with the greatest care, and not without danger and loss of time. And in saying this I do not refer only to some still almost wild coasts of Africa, Oceania or to Arctic and Antarctic countries. Even in our ancient Mediterranean, that old sea route of the earliest peoples, do we not come across inadequate charts? Almost everywhere currents are little known and more use might be made of them.

The delineation of the topography of Ocean depths which is to become so valuable in assisting the navigator to fix his position, is yet in its infancy. All which improves our knowledge of the physical properties of the oceans is destined to be of use to the Mariner. The field of research thus opened up before the Nautical Surveyor becomes as vast as the oceans with which he has to deal.

The necessity of utilising the discoveries of science in all its branches daily puts before him some new problem, creating a very extensive and specialized field of research for the Nautical Surveyor.

Geodetic and Topographical surveys form but a small part of it; it is on astronomical observations that we must rely for fixing our position in the open sea, on visibility for the lighting of coasts and dangers, on the latest discoveries in wireless signalling for continually picking up land-marks and signals when fog or great distance hinder visibility, on intricate electrical apparatus for studying and reconnoitering the invisible bottom of the sea, for ages we have been forced to content ourselves with groping from place to place like a blind man, and we are now enabled, without decreasing the vessel's speed, to trace its smallest details, thanks to the echo which shows them to us as in a mirror.

The best results will the more speedily be obtained by friendly collaboration. The time for jealously guarded secrets is past; what is needed is a mutual effort towards a common end. The improvement in methods of work which will result therefrom will enable chart production to become easier, more rapid and more accurate.

The Hydrographic Surveyor in this sense must look ahead. The long, accurate and intricate work which goes to produce a chart is required to be of use for many years, perhaps for a century, before an improved survey is made; it is therefore necessary for it to be a bit in advance of the needs of the day and, by taking full advantage of the best scientific

methods, so that the result may remain, for years, the most perfect implement available, whose inevitable inaccuracies will yet remain negligeable for the navigator, even when he is provided with improved methods of surveying and employs means of navigation which we are unable to foresee.

Many charts which were issued when the coasts were used by small vessels only, and that only by day, are made use of nowadays at all hours by large ships. A propos, if I may be permitted to mention a recollection of my own, I call to mind how, while taking part, about thirty years or so ago, in a survey of the coasts of this Principality, I little knew that the accurate survey which we were making, and which seemed superfluous for the needs of the few fishing boats which frequented the coasts in those days, would one day be made use of by the largest ships in the world.

But those of you, Gentlemen, who are Delegates, are convinced of these truths of which I apologize for reminding you, and it is because you thoroughly understand the importance of collaboration that you have been willing to meet again in a supplementary Conference without waiting for the expiration of the five yearly period, upon which you had decided.

The Bureau created by you does its best to facilitate for you this collaboration, in order that the achievements of one Service or of one single inventor should be made known to all, for the standardisation of methods and for placing original nautical documents at the disposal of all. But it can do nothing alone ; it cannot succeed in its aims without receiving from every Nation all necessary information.

I must express my deepest thanks to the Hydrographers of the various nations, who, imbued with the spirit of International solidarity, have willingly added to their already heavy duties as directors by communicating to the Bureau, by means of an active correspondance, valuable documents from their archives and for giving their opinions based on experience on all questions raised.

The League of Nations, under whose supervision our Bureau has been placed, and which has continually given proof of the interest it takes in it by sending financial Advisers and Auditors here, has been good enough to select an exceptionally suitable Representative to attend this Conference; I am pleased to welcome him. We hope also to see the Secretary-General of the International Commission on Aerial Navigation to assist us with certain questions of a technical nature at our Conference.

A certain number of Makers of Surveying Instruments have kindly responded to the appeal of the Bureau and are holding an exhibition of instruments. I hope that you will find there an opportunity for interesting comparisons which may give birth to continued progress.

I must express my thanks to the " Société des Conférences " and to its learned President, for kindly placing this hall at our disposal for our meetings, and also to the " Société des Bains de Mer " which has allowed us the free use of a very suitable building for the exhibition of instruments.

Sir,

Your Serene Highness, continuing to show to the Supplementary Hydrographic Conference the same interest which you displayed in that of 1926, has graciously consented to accept the Patronage of this Conference; permit me therefore to beg You to be kind enough to declare the Conference open.

---

## OPENING SPEECH
## by H. S. H. PRINCE PIERRE OF MONACO

Ladies and Gentlemen,

This International Hydrographic Conference which, once more, has assembled here the eminent Representatives of some twenty Nations, excites in Monaco very special interest for, during its sessions, the laying of the Foundation Stone of the building, which will shelter

the International Hydrographic Bureau henceforth, will take place. This act will demonstrate to you, Gentlemen, the deep satisfaction which is felt in that you establish your seat here for very many years and I am extremely pleased to be called upon a second time to express, with all who follow your fine activities, such a definite welcome to you.

The absence of Admiral Niblack is a cause of deep regret to-day. We hope that he will not be kept from you for long in an enforced rest which must irk this old seaman and worthy representative of such a great and vigorous Nation.

Gentlemen, since your Conference of 1926, the striking up-to-dateness of your work attracts the attention of the least informed. By the memorable and perfect exploit of Colonel Lindbergh, and by the magnificent but too often tragic attempts, aerial navigation has triumphed over the widest Oceans and thus today it intrudes into our thoughts and our customs : and, immediately, questions connected with aviation appear on your Agenda. The International Hydrographic Bureau, therefore, supervises the annihilation of distance, having already accomplished, by the collaboration of so many nations to a common end, the moral subdual of boundaries and prepared for the information of that international spirit which is so necessary to the stability of the world. The work which you carry out appears from its immediate importance and compass to be fully worthy of the high ideal of the League of Nations.

A mind, which today is no more, would have followed with ardent emotion from here, the accomplishment of your task; but this little corner of the earth, always in touch with the great happenings which mark the eras of Humanity, is glad to accomplish its destiny by receiving you and by enveloping you with good wishes.

It is a great and real pleasure to me to declare the first session of the Supplementary International Hydrographic Conference of 1929 open.

---

## COMMUNICATION
### by ING. HYD. GÉNÉRAL DE VANSSAY DE BLAVOUS

Your Highness,

I beg that you will permit me to communicate to the Conference a proposal which has just been handed to me on behalf of several of the Delegations :

The Delegates of the States Members, being desirous of giving expression to the gratitude of the Members of the International Hydrographic Bureau to the Principality of Monaco for the offices which it is placing freely at the disposal of the Bureau propose that this participation in the operation of the Bureau on the part of the Principality be considered as taking the place of the annual contribution which it has made until now.

This proposal is made by the Delegations of PORTUGAL, FRANCE, PERU, UNITED STATES OF AMERICA and ITALY.

It will be discussed later and I am sure that all Delegates will be pleased to approve it and thus show their gratitude to the Principality of Monaco.

---

# LIST OF DELEGATES

TO THE

FIRST SUPPLEMENTARY
INTERNATIONAL HYDROGRAPHIC CONFERENCE.

| | |
|---|---|
| ARGENTINE : | Commander Adolfo ETCHART, Head of the Section of Hydrography, Hydrographic Office.<br>Lieutenant-Commander Pedro LUISONI, Head of the Section of Navigation, Hydrographic Office. |
| AUSTRALIA : | (*Represented by the Senior British Delegate*). |
| BRAZIL : | (*Not represented*). |
| CHILE : | Commander J. HERRERA, of the Chilean Legation, Berlin. |
| CHINA : | (*Not represented*). |
| DENMARK : | Commodore H.O. RAVN, Hydrographer. |
| EGYPT : | H.E. El Lewa G. NAPIER TOMLIN PASHA, C.M.G., M.V.O., Director-General, Ports and Lights Administration.<br>Youbashi EL SAYED HAMZA EFFENDI, Navigating Officer, Ports and Lights Administration. |
| FRANCE : | Ingénieur-Hydrographe Général FICHOT, Hydrographer.<br>Ingénieur-Hydrographe en Chef COT, Head of the Coast of France Section of the Hydrographic Office.<br>Commander SAILLANT, Head of the Sailing Directions Section of the Hydrographic Office. |
| GERMANY : | Captain CLAUSSEN, Chief of the Hydrographic Section of the Naval Department.<br>Commander KURZE, Head of Surveys and Charts Section.<br>Regierungsrat Dr. RAUSCHELBACH, Head of Tides Section, Deutsche Seewarte. |
| GREAT BRITAIN : | Captain J.A. EDGELL, O.B.E., R.N., Assistant-Hydrographer.<br>Lieutenant-Commander A. DAY, R.N., Hydrographic Department. |
| GREECE : | Commander D. RASIKOTSIKAS, Assistant-Hydrographer and Head of Surveys and Researches.<br>Lieut.-Commander G. YORGOULIS, Head of Section of Navigation. |
| INTERNATIONAL COMMISSION FOR AIR NAVIGATION : | Mr. A. ROPER, Secretary-General. |
| ITALY : | Captain G. ROMAGNA-MANOIA, Hydrographer.<br>Professor M. TENANI, Head of the Division of Geophysics. |
| JAPAN : | Rear-Admiral Sueki YONEMURA, Hydrographer.<br>Commander Seizo MIURA, Naval Attaché, Paris.<br>Lieut.-Commander Eiji KUSAKARI, General Staff of the Navy. |
| LEAGUE OF NATIONS : | Commander Bruno BRIVONESI, Secretary of the Sub-Committee on Air Matters of the C.P.C. |

| | |
|---|---|
| MONACO : | Mons. Ferréol BUTAVAND, Councillor of the Government.<br>Mons. Bernard GALLÈPE, Councillor of the Government. |
| NETHERLANDS : | Captain J.L.H. LUYMES, Hydrographer.<br>Captain J.C.F. HOOYKAAS, Assistant-Hydrographer. |
| NORWAY : | Commander E. BJORSET, Hydrographer. |
| PERU : | Captain Ernesto CABALLERO Y LASTRES, Naval Attaché, Madrid. |
| POLAND : | Lieutenant Casimir SLIWERSKI, Hydrographer. |
| PORTUGAL : | Lieut.-Commander A.F. LOPES, Head of the Coast Survey. |
| SIAM : | *(Not represented).* |
| SPAIN : | Rear-Admiral Don L. HERRERO, Hydrographer.<br>Lieut.-Commander Don J. ESTRADA. |
| SWEDEN : | Commodore G.P. REINIUS, Hydrographer. |
| UNITED-STATES OF AMERICA : | *Coast and Geodetic Survey .*<br>Commander W.E. PARKER, Head of Division of Hydrography and Topography.<br>*Hydrographic Office :*<br>Rear-Admiral W.S. CROSLEY, U.S.N.<br>Captain George M. BAUM, U.S.N., Naval Attaché, Berlin. |

## LIST OF THE DIRECTING COMMITTEE, SECRETARY GENERAL AND ASSISTANTS

OF THE

INTERNATIONAL HYDROGRAPHIC BUREAU

DURING THE CONFERENCE.

DIRECTING COMMITTEE :

*President :* Rear-Admiral A.P. NIBLACK, D.S.M., U.S. Navy (retired).

*Directors :* Ingénieur Hydrographe Général P. DE VANSSAY DE BLAVOUS, French Navy (retired).

Captain L. TONTA, Royal Italian Navy.

SECRETARY-GENERAL : Commander G.B. SPICER-SIMSON, D.S.O., Royal British Navy (retired).

ASSISTANTS :

*Assistant-Secretary :* Lieutenant G. ALBERT, French Navy (retired).

*Technical Assistants :* Lieut.-Commander H. BENCKER, French Navy.

Commander W.P. BEEHLER, U.S. Navy (retired).

FIRST PART.

# A. REPORT ON THE WORK

done by the

## International Hydrographic Bureau

from NOVEMBER 1926 to APRIL 1929

# REPORT ON THE WORK

## done by the

## International Hydrographic Bureau.

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## LIST OF SUBJECTS.

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### I. CHARTS.

1. Conventional Signs and Abbreviations.
2. Depth Contours and Lines indicating various limits.
3. Original Charts.
5. List of Doubtful Shoals and Dangers.
6. List of Maritime Geographical Positions.

### II. SAILING DIRECTIONS.

6a. Original Sailing Directions.
7. Study of the Sailing Directions published by the various countries.
8. Distance Tables.

### III. NOTICES TO MARINERS..

9. Centralisation in Foreign Ports of Notices to Mariners.
10. Tabulation of urgent Notices to Mariners in the International Code.

### IV. TIDES.

11. Publication of Harmonic Constants.
12. Study of the Tide-Tables published by the various countries.

### V. METHODS AND INSTRUMENTS.

13. Echo Sounding.
14. Sound-Ranging — Phonotelemetry.
15. Velocity of Sound in Sea Water and method of insertion of echo-soundings on charts.
16. Centralisation of Echo Soundings.
17. Keeping up-to-date of the General Bathymetric Chart of the Oceans.
18. Other methods of sounding.
19. Use of Aircraft for Surveying.
20. Hydrographic Instruments.
21. Methods of Engraving and Printing Marine Charts.

## VI. WORK AND ORGANISATION OF THE OFFICES. - RELATIONS BETWEEN OFFICES.

22. Work carried out and projected by the Offices.
23. Report on divergencies between various hydrographic documents and the resolutions adopted by the Conference.
24. Requests for information between Offices.
25. Organisation and History of the Offices.
26. Surveying vessels.
27. Work of an international character.

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29. Visibility of Lights.
30. Danger zones and Safety Lanes.
31. Charges for radiogoniometric bearings.
32. Study of Oceanic Currents.
33. Terminology of submarine relief.
34. Buoyage and Coast Lighting.
35. List of Life-Saving Stations.
36. List of Signal Stations.
37. International Convention with reference to the use of W. T.
38. Revision of the signals of the International Code.
39. Symbols and Abbreviations — Aircraft.
40. Legal Holidays.
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43 Uniform international notations for latitudes, longitudes, etc...
44. Standardisation of the sea-mile.
45. Ellipsoids and Tables of Meridional Parts.
46. Bibliography and Hydrographic Documentation.
46a. Cartography of Polar Regions.

## VIII. ADMINISTRATIVE.

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55. Free deliveries and exchange of publications.
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58. Report of Proceedings of the last Conference.
59. Publications issued by the Bureau.
60 Correspondence received and exchanged.
61 Distribution, according to their nature, of the various branches of work of the International Hydrographic Bureau among the Directors.

# REPORT ON THE WORK
## done by the
## International Hydrographic Bureau.

NOTICE. — *The paging in the margin is that of the pamphlet distributed before the Conference, and to which it is necessary to refer in order to follow the discussions.*

# I. CHARTS.

[Page 7]

### 1. Conventional Signs and Abbreviations.

The Bureau has completed the preparation of an international Manual of Symbols and Abbreviations for the use of mariners.

Proofs of this publication, drawings and text, have been separately communicated to Members for correction. The Manual has been printed and has appeared in the form of Special Publication N° 22.

At the request of the Hydrographic Office of the United States of America, there has been annexed to this Manual a recapitulatory tabulation of the practices followed by the various countries with reference to notation on charts and nautical documents, of positions, bearings, light-sectors, etc...

A special part containing the abbreviations relative to lights is being prepared.

The Bureau has also given its attention to aviation symbols which it might be useful to insert on marine charts.

This question has been dealt with in Bulletin N° IV, 1928, p. 91, 96 and 97 ; the Committee will submit a proposal to the Conference. See also Circular letter N° 12-H. of 1928.

### 2. Depth Contours and Lines indicating various limits.

A) *Depth Contours.*

Prior to its incorporation in the Manual of Conventional Signs and Abbreviations, a synoptic table giving the depth contours employed by the various countries has been forwarded to the States-Members for correction. This table will form the basis of a discussion at the approaching Conference.

For this purpose, the Directing Committee has prepared a short treatise on the question, accompanied by proposals (see work entitled : — " Proposals. ").

[Page 8] B) *Lines indicating various limits.*

Concerning this matter, Denmark has addressed a question to the Bureau arising from the desire of foreign fishermen to find on the chart the limits within which fishing is forbidden to them in the neighbourhood of territorial zones.

The Directing Committee replied to this question that, so far, no symbol for a limit of this kind has been adopted and that it proposed to employ in future a line of fine dashes alternating with small fish.

The Bureau has been led to study the method of signifying on marine charts various limits, such as zones reserved for dumping-grounds ; forbidden zones ; reserved zones ; limits of the turn of currents ; cotidal lines, etc... It will submit proposals to the next Conference.

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## 3. Original Charts.

The catalogue of original charts has been begun by the part dealing with the Seas of Europe, the manuscript of which has been forwarded to the interested States for correction. Indexes are being drawn. The first sheets of the catalogue will be printed and presented to the Conference.

The Bureau has also begun the preparation of a chart-index of original Sailing Directions.

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## 4. Progress of Hydrography throughout the World.

Charts relating to the progress of world hydrography were published in the Hydrographic Review, Vol. IV, N° 2, pp. 45. 52, for the coasts of Great-Britain, Sweden, and the Netherlands East Indies.

The Directing Committee intends to continue this study for which a cartographic representation does not always seem sufficient.

The Bureau intends, in the near future, to give to each original chart; in a special column of the Catalogue of Original Charts, a suitable sign for indicating briefly the nature of the surveys used for the preparation of the chart. This will constitute a useful contribution to the study of hydrography.

[Page 9] for example : * rapid reconnaissances,

** partial surveys incompletely or superficially examined,

*** Complete surveys based on accurate triangulation and checked, if necessary, by sweeping.

Further, when the surveyed areas are subject to rapid changes owing to shifting bottoms, the asterisks will be put between brackets.

(See : Proposals made to the 1929 Conference - Chapter 20 - Original Charts).

The Directing Committee has invited Delegates to bring to the Conference reports on the progress of hydrography in their respective countries, and, doubtless, will ask the States Members for further information on this subject.

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## 5. List of Doubtful Shoals and Dangers.

By Circular-Letter N° 28-H of 1927, the Bureau forwarded to Members a provisional list of doubtful dangers, requesting them to point out errors and necessary corrections, and to supply it with information of an historical nature concerning the origin of these shoals or reefs.

This corrected list, accompanied by charts given by the Hydrographic Office of the United States Navy, was issued as Special Publication N° 20, which appeared in January 1928.

The Bureau publishes the changes in, or additions to this list which reach it, in the form of supplements.

The Bureau has begun to publish, in the form of slips, details of an historical nature which reach it concerning researches made for shoals (e. g. *see* Hydrographic Review, Vol. V, N° 1, page 223).

The Bureau has published three supplements to the List of Doubtful Dangers (Special Publication N° 20) and has also drawn up a certain number of historical notes with reference to these dangers, and these will be submitted to the Conference as examples of what is being done.

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## 6. List of Maritime Geographical Positions.

By Circular-Letter N° 20-H, 1927, the Bureau indicated the plan which it proposes to adopt for the publication of this List.

The first manuscript, containing Geographical Positions sent by the Netherlands. the Dutch East Indies, Portugal, Great Britain, Greece, Italy, Colombia, by Germany for its former Colonies and by the United States of America, is in press.

It will be presented to the Conference.

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# II. SAILING DIRECTIONS.

## 6a. Original Sailing Directions.

The Bureau has prepared a provisional list of original Sailing Directions to which are attached various comments and the index chart which is the subject of Circular N° 3 published in the Bulletin for February 1929.

[Page 10]

## 7. Study of the Sailing Directions published by the various countries.

The International Hydrographic Bureau has undertaken the study of the Sailing Directions published by various countries, in order to ascertain :—

1° the list of the different information given therein in the chapter headed "General Information" and for the description of the coasts and harbours.

2° the method according to which the above information is grouped or assembled.

3° the form under which this information is given and is adapted to the various ways in which it is used by the navigator.

A preliminary report has been drawn up and as soon as it is complete it will be submitted to the Members with the object of obtaining their opinions thereon.

## 8. Distance Tables.

By Circular-Letter N° 8-H of 22nd May, 1928, the Bureau undertook to collate all information concerning the tables or charts indicating distances from port to port, published by the various countries.

The question of the choice of common departure points, or common route points, is being studied.

# III. NOTICES TO MARINERS.

## 9. Centralisation in Foreign Ports of Notices to Mariners. [Page 11]

By Circular-Letter N° 42-H, 1927, the Bureau proposed to have centralised in the principal foreign ports, at a place where ship-masters might consult them free of charge, all the Notices to Mariners published by the various countries.

Favourable replies have already been obtained either by the direct action of Hydrographic Offices or by the concerted action of Consuls representing the maritime states in various ports (see Circular-Letter N° 45-H of 1927, and Hydrographic Bulletin 1928; II, p. 50; III, p. 57; V, p. 119, VI, p. 145; VII, p 177 and VIII, p. 232).

All replies will be tabulated and the results communicated to the States Members.

It seems that the best method of obtaining this centralisation will be for all Hydrographic Offices to send their Notices to Mariners to the addresses which the Director of each Hydrographic Office will kindly supply to this Bureau, for the ports of his own country or its dependencies, which list will be further supplemented by lists for all other countries.

This question will appear on the Agenda of the Conference.

A table giving all the ports where such centralisation has been established and the addresses of the Offices where Notices may be consulted, was published in the Bulletin for January 1929, N° 1, page 11.

## 10. Tabulation of urgent Notices to Mariners in the International Code.

After having studied the Notices to Mariners published by the various countries and analysed those of an urgent and important character appearing most frequently, the Bureau has begun the preparation and study of a restricted table, which would give synthetically a précis of the most important Notices.

# IV. TIDES.

[Page 12]

## 11. Publication of Harmonic Constants.

In conformity with the decisions of the Conference, the International Hydrographic Bureau, by Circular-Letter N° 37-H of 1926, requested the opinion, with reasons, of the Offices, concerning the form which should be adopted for the publication of the Table.

A summary of the replies and results of this inquiry is given in a Report appearing in the Hydrographic Bulletin for August 1928.

On the other hand, the Bureau has collated all the constants brought to its knowledge and, where necessary, has effected the transformation into metric units. In August, 1928, all the elements thus assembled were comunicated to the various Hydrographic Offices concerned, for correction and complementary advice.

The above Report and all details received by the Bureau previous to 1st April, 1929, will be submitted to the next Conference.

## 12. Study of the Tide-Tables published by the various countries.

The Bureau has begun a study of the Tide-tables published by the various countries, and has drawn up a list of the ports for which the respective authorities give detailed predictions.

The results of this study will be published in the Hydrographic Review for May 1929 and will contain the list of all ports for which detailed predictions are published.

# V. METHODS AND INSTRUMENTS.

## 13. Echo Sounding.

[Page 13]

The Bureau has continued to publish, in the Hydrographic Review and in the Bulletin, the information obtained concerning the various appliances : — Fathometer, Echolot, Echo Sounder, Sondeur à ultra sons Langevin-Florisson (Langevin-Florisson supersonic sounding apparatus), Sondeur par choc Marti, (the Marti Shock-system Sounder), etc... (*See* Hydrographic Review Vol. V, N° 1, p. 135 and Vol. V, N° 2, p. 107).

## 14. Sound-Ranging - Phonotelemetry.

By Circular-Letter N° 24-H (1927) the Bureau requested descriptive and bibliographic information concerning submarine range-finding appliances, hydrophones and chronographs for position finding in hydrographic surveys.

The few replies which have reached the Bureau have not contained new information. The matter supplied by the United States of America has already been published in the Hydrographic Review, Vol. III, N° 1, p. 52, under the heading : — " Radio Acoustic Method of Position Finding in Hydrographic Surveys. "

In order to obtain fuller information, the Bureau has had to approach directly the various manufacturers.

The Bureau has begun to publish a series of studies concerning this question. (*See* Hydrographic Review Vol. IV, N° 2, p. 143 - Vol. V, N° 1, p. 91).

It would be of interest if all experiments carried out by States Members on this subject were communicated to the Bureau or the Conference.

## 15. Velocity of Sound in Sea Water and method of insertion of echo-soundings on charts.

[Page 14]

As a result of a proposal made by the German Hydrographic Office, the Directing Committee, in Circular N° 1 of the Bulletin (February 1928, p. 29) explained its views with reference to the adoption of a standard velocity of sound and as to distinguishing echo-soundings.

It requested Members to communicate their point of view on these questions.

Replies to Circular N° 1, have been published in Bulletin N° IV, p. 84; V, p. 115; VI, pages 147, 148, 149, 150 and IX.

A discussion of these questions has been placed on the agenda of the approaching Conference.

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## 16. Centralisation of Echo Soundings.

By Bulletin Circular N° 4 (April 1928, p. 81) the Directing Committee informed the States Members of the proposal made by the Director of the Swedish Hydrographic Office, at the same time requesting them to forward their opinions and suggestions as to methods of systematically collating, at the International Hydrographic Bureau, the data obtained by echo sounding. See also Bulletin of July 1928, pages 163-166. This information would be available for a General Bathymetric Chart of the Oceans (See N° 17 below).

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## 17. Keeping up-to-date of the General Bathymetric Chart of the Oceans.

The Directing Committee has received from Dr Richard, lately Director of the Scientific Office of H.S.H. Prince Albert of Monaco, a letter which invites the International Hydrographic Bureau to undertake to keep the General Bathymetric Chart of the Oceans up to date with the progress of science.

[Page 15] The Directing Committee did not consider that it should accept this work without reference to the States Members, and it will ask the next International Hydrographic Conference, which is to take place in 1929, to authorise it to consider this work as part of that which it is to undertake.

Information concerning this question is given in Bulletin N° III, March 1928, p. 63.

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## 18. Other methods of sounding.

By Circular Letter N° 33-H, 1926, the Bureau opened an inquiry concerning Sounding by Sweeping, and has received very complete information from the United States, the publications of which it has mentioned. The Bureau, however, is waiting for the receipt of further replies to this circular in order to publish a comprehensive study of the question.

The Bureau has also noted the article on fish-lead sounding published in 1923 in the French Annales Hydrographiques.

A study with reference to the curvature of the lead line appeared in the Hydrographic Review, Vol. IV, N° 2, p. 111.

An article upon a towed sounder equipped with pressure gauge and elbow-kite was published in the Hydrographic Review, Vol. IV, N° 2, p. 165.

A description of the United States C. and G. Survey pressure sounding tube was given in Hydrographic Review, Vol. V, N° 1, p. 227.

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## 19. Use of Aircraft for Surveying.

Replies to Circular-Letter N° 34-H 1926 were published in Hydrographic Review Vol. IV, N° 2, p. 53, with a study on the Resection in Space of the position of an aeroplane at the moment when a photograph is taken.

Another article on the same subject appeared in the Hydrographic Review, Vol. V, N° 1, p. 79.

It would be of interest if all experiments carried out by States Members on this subject were communicated to the Bureau or the Conference.

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## 20. Hydrographic Instruments.

[Page 16]

Short notices appearing in the Hydrographic Review have given information concerning various instruments or the method of testing them:— Current meters, self-recording tide-gauges, theodolites, sextants, compasses, etc...

The Bureau has requested information with reference to chronographic recorders of radio signals.

Circular-Letter N° 23-H 1927 specially requested information concerning appliances used for the determination of longitudes by W/T. The reply sent by the Hydrographic Office of the U.S. Navy will appear in the Hydrographic Review of November 1928.

The Bureau has requested the exhibition at the next Conference of types of new instruments, which may be examined by the Delegates, and which might later be sent on to the Exhibition of Oceanographic and Hydrographic Instruments in Seville, Spain, in April, May and June 1929.

The Bureau has sent to the Oceanographic Exhibition at Seville, photographs and descriptions of new oceanographic instruments which reached it after Special Publication N° 19 was published.

A set of photographs of surveying vessels and of the publications of the Bureau have also been sent.

## 21. Methods of Engraving and Printing Marine Charts.

Information on the Pantograver and the Auto-engraver has been published in the Hydrographic Review (Vol. IV, N° 1, p. 33 and Vol. V, N° 1, p. 41).

Circular Letter N° 1-H 1927 asked as to the practices followed by the different Offices in chart printing. The results of the replies received to this inquiry were published in the Hydrographic Review Vol. V, N° 1, p. 9.

# VI. WORK and ORGANISATION of the OFFICES. RELATIONS between OFFICES.

## 22. Work carried out and projected by the Offices.

[Page 17]

(Art. 12 of the Statutes).

The Bureau has kept States Members informed of the communications received by it concerning work carried out, being carried out or intended to be carried out in the near future, by Hydrographic Offices. Thus notice has been given by Circular-Letters, or by Circulars appearing in the Bulletin, of work by Germany, Chile, Greece, Italy, Japan, Netherlands, Norway, Portugal, Siam and Sweden.

On the other hand the Bureau has obtained the cooperation of the "Administration de l'Hydrographie de l'U.R.S.S." for the exchange of charts and periodical publications and for receiving information concerning hydrographic surveys carried out or projected.

C. L. 1926 — N° 35-H.
C. L. 1927 — N° 14-H — 21-H — 22-H — 30-H — 32-H — 33-H — 35-H — 39-H.
Bulletin 1928 — III, Circular N° 3; V, Circular N° 5; VI, Circulars N° 7, 8, 9, 10; VII, Circulars N° 12, 13.

## 23. Report on divergencies between various hydrographic documents and the resolutions adopted by the Conferences.

The Bureau has already collated a few data concerning this question; in addition, it has expressed a desire to receive for the Conference, from Hydrographic Offices themselves, reports on the application in each State of decisions made by previous Conferences. Also, the decisions of the Chart Committee of the last Conference not yet having been adopted in plenary session, these cannot be considered by the States as definite.

## 24. Requests for information between Offices.

[Page 18]

(Art. 15 of the Statutes).

The Siamese Hydrographic Office requested the International Hydrographic Bureau to forward to it all useful information regarding the

organisation of a meteorological station in Siam. Such information was requested from the States Members by C. L. N° 38-H, 1927.

Numerous replies to this request were received, and have been communicated to Siam, which has instructed the Bureau to thank the States Members on its behalf. (Bulletin 1928 - VI, p. 101).

The Portuguese Hydrographic Office asked the International Hydrographic Bureau to forward to it all useful information with a view to the construction of a modern surveying vessel. The Bureau has invited certain Members kindly to co-operate in supplying such information. Comprehensive replies have been received from the Netherlands and from the United States of America, and these have been transmitted to the Portuguese Hydrographic Office. The Bureau has considered the publication in the Review of a part of this information, so as to bring it to the knowledge of all Members of the Bureau.

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## 25. Organisation and History of the Offices.

(Art. 47 of the Statutes).

The Bureau has published notices in the Hydrographic Review concerning the Hydrographic Offices of the following countries: — Norway, Sweden, Denmark, United States of America, Argentine, Japan, Spain, China, U.R.S.S., Estonia, Kingdom of the Serbs, Croates and Slovenes.

(Hydrographic Reviews Vol. IV, N° 1, pages 11, 15, 19, 231; Vol. IV, N° 2, pages 17, 23; Vol. V, N° 1, pages 43, 59, 63, 67, 73, 77).

States Members have been kept informed by Circular Letters, of the various changes of Chiefs of Hydrographic Offices

*Year Book*

In January, 1928, the Bureau published a Year Book giving the addresses of all the Hydrographic Offices of States Members and non-Members of the Bureau, with mention of their various departments. (Circular Letter N° 31-H/6-R, 1927).

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[Page 10]

## 26. Surveying vessels.

The Bureau has continued the publication in the Hydrographic Review of photographs and information concerning Surveying Vessels, their crews and their equipment.

Vol. V, N° 1, page 52 *et seq.* gives a description of the surveying vessels of the United States of America, of Japan, of Siam and of China.

New information is being collated as the result of a request from Portugal (*See* N° 24 above).

## 27. Work of an international character.

(Art. 13 and 14 of the Statutes)

The Bureau has made every effort to keep Members informed of the particular points with regard to which it would be useful to concentrate research, inspire co-operation or attract the attention of the Offices, with a view to the advancement of hydrography or navigation.

Thus the Bureau has pointed out the necessity of research for shoals in the neighbourhood of Cape Finisterre (Bulletin 1928 - I, page 3; II, page 44 ; IV, page 89; V, page 112; VII, p. 181); has served as intermediary for participation in the hydrographic survey of the Albanian coasts (Bulletin 1928 - II, page 45); and to point out to the competent authorities the disadvantage presented by the characteristics of Trafalgar Light (Bulletin 1928 - I, page 20; IV, page 99; V, page 126).

# VII. VARIOUS STUDIES.

[Page 20]

## 28. Limits of Oceans and Seas.

As a result of the observations made by various Members on the question of the delimitation proposed by Circular-Letter N° 1-H 1923, the Bureau has been led to modify certain limits so as to take into account, as far as possible, all observations and to keep within the conditions prescribed by the London Conference, viz. " that it is desirable that the limits of enclosed seas should be laid down, and that it might be stated to what sea or ocean a strait connecting two of them should be reckoned. "

For this purpose the Bureau has published Spec. Pub. N° 23 which gives in their final form, the proposals to be submitted to the approaching Conference.

## 29. Visibility of Lights.

The Bureau continues to receive observations on visibility of lights addressed to it by the States Members. Observations have been received from the United States, Great Britain, Danemark, and Italy.

The Bureau analyses and classifies the observations which reach it, with a view to the calculation of percentages of visibility at different distances.

## 30. Danger zones and Safety Lanes.

A study concerning various trans-North Atlantic safety lanes was published in the Hydrographic Review, Vol. IV, N° 2, page 199.

[Page 21]

The Committee on Charts and Technical Documents of the last Conference recommended that the question of Safety Lanes and Danger Zones be referred to an Internation Organisation. The Directing Committee is of opinion that this question is more likely to be considered favourably if the International Organisation has before it suggestions emanating from various maritime countries. The Delegates are invited, therefore, to make proposals as to definite zones in connection with this subject for submission to the Conference before it is referred to the International Organisation.

The Bureau has made enquiries as to the International Organisation which could successfully take up this question.

A suggestion that it should undertake the study thereof was made to and has been accepted by the Organising Committee of the International Shipping Conference. This Committee could submit the question to the International Conference on Safety of Life at Sea which the British Government is convening in London in April 1929.

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## 31. Charges for radiogoniometric bearings.

The 1926 Conference having instructed the International Hydrographic Bureau, to bring about the suppression of charges for radiogoniometric bearings, through heads of the Hydrographic Offices, it sent to the Directors of Hydrographic Offices Circular-Letter N° 30-H of 24th November 1926. This letter requested the Directors kindly to take such steps as in their opinion would be most efficacious in obtaining relief from charges for these bearings

Replies received were published in Bulletin 1928 - VI, pages 154, 155, 156, and VIII, page 233.

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## 32. Study of Oceanic Currents.

In March 1927, the Bureau issued Special Publication N° 19 entitled: " Ocean currents in relation to Oceanography, Marine Biology, Meteorology and Hydrography. "

This publication was sent to the Congress of the Geodetic and Geophysic Union (Oceanographic Section), at Prague, as the Bureau's contribution towards the study of oceanographic instruments.

(Circular Letter N° 17-H, 1927).

New appliances for the measurement of currents have been described in Hydrographic Review Vol. IV, N° 2, pages 207-208; others will be described in the Hydrographic Review for the month of November 1928.

As it is necessary in Oceanographic observations to use the same type [Page 22] of instruments to get comparable results, the Exhibition at Seville, Spain, in 1929, may result in the adoption of Standard types of instruments for all expeditions doing oceanographic work.

This Bureau will submit to the Committee in charge of the Exhibition all data it has in its files as to the instruments used in Oceanography and Hydrography.

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## 33. Terminology of submarine relief.

A recapitulatory table containing the replies to Circular-Letter N° 21-H 1924, completed by Letters N° 40-H, 1926 and 2-H, 1928, will be published in the Hydrographic Review of November 1928.

The views of the principal maritime nations will be given in the Hydrographic Review Vol. V, N° 2, November 1928, together with the tabulation of the terms used by them in submarine relief.

No further action seems necessary.

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## 34. Buoyage and Coast Lighting.

The Bureau has kept States Members informed of the work of the Committees which are dealing with this question, and which are in regular correspondence with it.

Certain corrections concerning the Table of Buoyage Systems were brought to the notice of Members by Circular-Letter N° 4-H, 1927. The International Hydrographic Bureau has also transmitted to Members the Report on the Buoyage Conference at Stockholm (1926), drawn up by the Technical Committee of the Communications and Transit Section of the League of Nations. (C. L. N° 29-H, 1926 and C. L. N° 5-H, 1927).

(Hydrographic Review Vol. IV, N° 2, p. 184 - Bulletin 1928, N° IV, p. 103).

The Bureau keeps in communication with the Section of the League of Nations which deals with the question of calling an International Conference on "Uniformity in Buoyage and Coastal Lighting" in the near future; but the date of which is not yet definitely decided.

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[Page 23]

## 35. List of Life-Saving Stations.

Special Publication N° 17, January 1927 (Circular-Letter N° 7-H, 1927) gives a Summary of Data on Safety of Life at Sea, with the signals used in this connection.

This memorandum, in particular, brings the "Rules for avoiding Collisions at Sea" in line with the various international conventions and agreements.

Special Publication N° 18, March 1927 (C. L. 15-H, 1927) gives the List of Life-Saving Stations throughout the world with their Equipment and Geographical Positions.

The list was communicated to the International Radio Conference at Washington (1927) with a view to its possible insertion in the International Signal Code.

The Bureau has received important corrections to this list of which a new edition has been published (Special Publication N° 18, revised) (See Circular-Letter N° 11-H, August 1928).

Further steps have been taken with the object of obtaining corrected lists from Russia and Turkey.

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## 36. List of Signal Stations.

The Bureau has published the English Edition of 5 tabulations of Coastal Signals of other than European and Mediterranean countries and requested that they be communicated to the competent authorities for use as necessary. (Circular Letter N° 29-H, 1927).

The International Hydrographic Bureau has kept up to date the Synoptic Tables of coastal signals, of port signals and of storm-warning signals, which are for sale at the Bureau.

On the other hand, in order to bring uniformity out of the very divergent Coastal and Port Signals now in use for Tide and Depth Signals, the Bureau, by Circular-Letter N° 29-H, 23rd November 1926, endorsed the proposals made at Stockholm by the Technical Committee as regards the "State of the Tide" and "Height of Water" for local as well as non-local purposes, and the signals for "General Movements of Vessels"

For the Signals relating to Quarantine, the Bureau is working in co-operation with the Office International d'Hygiène Publique (Circular-Letter N° 38-H of 21st December 1926).

The Bureau has continued its enquiry, to find out in which Hydro- [Page 24]
graphic documents the different countries give information concerning the position and the description of the various signal-stations such as semaphores, international signal-masts, storm or ice-signal stations, time-signal stations, radiogonometric stations, submarine signal stations by hydrophones, coastal radio stations, etc...

The Bureau has prepared provisional lists giving, by countries, the positions of these different visual stations, which lists have been forwarded to each country for verification. The view of the States Members as to when these corrected lists shall be printed will be requested at the Conference.

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## 37. International Convention with reference to the use of W. T.

At the request of the Marine Amt of the Reichswehrministerium, the Directing Committee drew the attention of Members (C. L. N° 27-H of 1927) to the various proposals with regard to the use of W/T in navigation, in view of the Radiotelegraphic Conference at Washington in October, 1927.

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## 38. Revision of the signals of the International Code.

For the preparatory work of the Washington Conference or of subsidiary Conferences, the Bureau, by Circular-Letter N° 34-H, 1927, drew the attention of Members to those publications of the Bureau which Delegates to these Conferences would find it useful to consult regarding the standardisation of signals.

Copies of the editions of the International Code published in different languages by eleven nations, were loaned by the Bureau to the Washington Conference. together with a memorandum concerning the Revision of the International Code.

The Signal Code books were returned after the Conference.

The Washington Conference instructed the British Board of Trade to prepare a complete revision and rearrangement of the International Code, with the co-operation of experts of various nationalities.

An International Committee has been meeting in London under the Board of Trade, since October 1928, to undertake the work agreed upon during the International Radiotelegraphic Conference of Washington in 1928. Several years will elapse before the new edition of the International Code is completed and translated into various languages. Several of the signals proposed by the Bureau have been incorporated in the new edition. The new publication will contain nothing except signals and subjects referring thereto.

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[Page 25]

## 39. Symbols and Abbreviations - Aircraft. .

As a result of a request from Portugal, the Bureau has been led to study the symbols employed on aerial charts and has entered into communication on this subject with the International Committee of Aerial Navigation.

Circular-Letters N° 25-H, 1927 and N° 3-H, 1928, requested Members to inform the Bureau of the systems and symbols employed by them.

The Bureau has drawn up a synoptic Table in accordance with the replies received. giving the symbols, signs and abbreviations and beacons (guiding-marks) on aerial charts.

Meanwhile copies have been sent to various countries with a questionnaire as to their views on the proposed Conventional Symbols and Abbreviations.

The replies will be presented to the next Conference with a view to standardisation of the aerial charts which the various Hydrographic Offices may publish.

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## 40. Legal Holidays.

By Circular Letter N° 7-H, 1926, the Bureau enquired of the various States as to the dates of Legal Holidays on which Loading, Unloading, Coaling, etc., of vessels in their ports are stopped. The result of these enquiries appeared in the Year Book of the International Hydrographic Bureau.

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## 41. Time zones - Legal time - Summer time.

By means of a questionnaire accompanying Circular-Letter N° 6-H, 1928, the Bureau has collated official information concerning the rules governing summer-time in maritime countries.

A list of the countries employing zone-time and of those employing other than zone-time was reproduced in the International Hydrographic Bureau's Year-Book. (*See* also Bulletin 1928, N° III - page 68 and N° V, page 126).

These lists will be kept up to date and completed by means of any new information received.

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## 42. Time signals by Visual Light Signals.

[Page 26]

By Bulletin Circular N° 2 (II, 1928, page 38), the Bureau transmitted a request emanating from the Nautische Abteilung of the Marineleitung for the opinion of Members on the subject of a possible standardisation of luminous time-signals, made in ports, by the lighting and the extinction of lamps.

Replies to this inquiry appeared in the Bulletin (IV, p. 98 - V, p. 121).

The question of the standardisation of these signals will be discussed at the Conference.

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## 43. Uniform international notations for latitudes, longitudes, etc.

The Bureau has corresponded with the International Astronomical Union and the International Geodetic and Geophysic Union in order to find out to what extent the system of uniform notations, proposed by the International Astronomical Union in 1925, has been adopted and applied by the various countries.

A summary of this correspondence appears in the Hydrographic Review (Vol. V, N° 1, page 233).

The question of possible action on the part of the Bureau with reference to this subject will be placed before the next Conference.

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## 44. Standardisation of the sea-mile.

The Bureau has instituted an inquiry in order to find out the various values adopted by different countries to define the sea-mile.

It has been possible to incorporate part of these numerical data in a special column of the Manual of Signs and Abbreviations.

The Directing Committee proposes that the sea-mile be standardised at 1852 metres. An article on this subject appeared in the Hydrographic Review Vol. V, N° 1 : May 1928, page 227 - Units of Length.

A proposal will be made at the Conference.

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## 45. Ellipsoids and Tables of Meridional Parts.

As a result of Circular Letters N° 18-H and 20-H of 1927, the International Hydrographic Bureau has been able to collate certain information on the dimensions of the ellipsoids employed for the geodetic operations connected with hydrographic surveys, as well as on the Tables which have been calculated according to these dimensions, either for geodetic work or for graduating sheets on Mercator's Projection.

This information appears in the Hydrographic Review Vol. IV, N° 1, page 226; Vol. IV, N° 2, page 125; and Vol. V, N° 1, page 203.

On the other hand, the International Hydrographic Bureau has issued a Table of Meridional Parts to 5 places of decimals for every sexagesimal minute for the international ellipsoid as adopted at the Madrid Congress of 1924 by the International Geodetic and Geophysic Union (compression $\alpha = 1/297$).

Appended Tables give the corrections necessary to pass from the international ellipsoid to the ellipsoid of Clarke (1880) or that of Bessel, the lengths of the arcs of the meridian and the parallels, the values of meridional parts for the sphere, etc...

The I. H. B. request the Conference to recommend the use of the international ellipsoid for the requirements of hydrography, wherever the necessity of using previous work does not form an obstacle to such use.

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## 46. Bibliography and Hydrographic Documentation.

The International Hydrographic Bureau, as soon as it receives the publications of the Offices, studies them from the point of view of its various branches of work.

With reference to this question, the Directing Committee has sent to Members Circular-Letter N° 16-H, 1927 with the object of completing the lists of documents which it desires to receive regularly, and of maintaining in a complete state the collections provided for in Article 10 (b) and (c) of the Statutes.

The International Hydrographic Bureau has transmitted to its Members a request from Siam, in conformity with the terms of the resolution adopted at the London (1919) Conference concerning the exchange of documents between Offices.

The list added to Circular-Letter N° 1-H of 1928, shows the nature [Page 28] of documents which are suitable for exchange.

Reviews of works or articles concerning hydrography are published in each number of the Review.

Lastly, bibliographic references to works and articles concerning hydrography are published in each number of the Hydrographic Review in a form convenient for the use of libraries.

Through the medium of the Bulletin, the Bureau particularly gives notice of new publications to which attention should be drawn.

To encourage authors to write articles, Circular-Letters N° 40-H and N° 43-H of 1927 offered remuneration to collaborators in the Review and the Bulletin.

Delegates to the Conference have been invited to present reports on subjects of interest to hydrography. (C. L. N° 4-H/2-R, 1928 and C. L. 9-H, 1928).

The Bureau publishes in the monthly Bulletin a list of the charts and nautical works received by the Bureau during the preceding month.

The following is a numerical statement of the documents received year by year by the Bureau : —

| | 1926 | 1927 | to Sept. 1928 |
|---|---|---|---|
| New charts ..... | 108 | 63 | 58 |
| New editions of charts..... | 259 | 527 | 314 |
| Nautical works ..... | 270 | 140 | 68 |

## 46a. Cartography of Polar Regions.

A monograph on a new type of chart for compass navigation in Polar Regions was published in Volume V, N° 2 of the Hydrographic Review. The May number of the Hydrographic Review, now in the press, will contain the continuation of this monograph and some tables for the construction of this type of chart.

# VIII. ADMINISTRATIVE.

## 47. Statutes.

[Page 29]

The Directing Committee has published the new text of the Statutes adopted by the Conference (1926) - (C. L. 9-H 1927).

By Circular Letter N° 2-R/4-H, 1928, the Committee proposed certain amendments to Articles 34 and 57 (b) of the Statutes. Proposals as to amendment of the Statutes will be submitted to the Conference.

## 48. Keeping up-to-date of the Table of Tonnages.

By Circular-Letter N° 9-R, 1925, dated 30th November 1925, the Directing Committee requested the information necessary to keep this table up to date.

In addition, the keeping up to date of this list formed the basis of a special proposal of the Directing Committee, indicated in C.L N° 2-R/4-H, 1928 ; this proposal will be submitted to the Conference.

## 49. Regulations as to Internal Organisation.

In conformity with the desire expressed by the 2nd Conference, the Directing Committee has drawn up regulations as to internal organisation (see Circular-Letter 36-H/7-R of 1927 and Annual Report, 1927, page 37).

The distribution of the work among the Directors is indicated below.

## 50. Regulations concerning the Personnel.

[Page 30]

The Directing Committee has adopted regulations for the personnel of the Bureau. These regulations were reproduced in the Annual Report for 1927, page 43.

The Committee will submit to the Conference a draft scheme of a Retirement Fund for the staff (C.L. N° 2-R/4-H 1928).

## 51. Financial Regulations.

With the co-operation of the Control Section of the League of Nations, the Directing Committee has drawn up financial regulations. These regulations are annexed to the Annual Report for 1926, page 45.

An amendment to these regulations was communicated to the States Members by Circular Letter N° 5-R of 1928.

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## 52. Annual Reports.

The Annual Reports provided for by the Statutes have been sent to Members for the years 1926, 1927 and 1928. They contain a report on the Work of the Bureau, an administrative report, a financial report, budgetary estimates, and also the auditor's report on the accounts of the I.H.B., and a list of Official Representatives.

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## 53. Recovery of Contributions in arrear.

Circular-Letter N° 4-R, 1927, reported the steps taken by the Directing Committee in communicating with the League of Nations concerning Belgium's contributions in arrear.

The Directing Committee has sent letters of reminder to those Members whose contributions are in arrear.

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## 54. Sale price of Publications.

As a result of a decision made by the last Conference, the Directing Committee has fixed a sale price for publications as nearly related to cost price as possible.

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## 55. Free deliveries and Exchange of Publications.

In order to reduce the number of free deliveries of the publications of the Bureau, Members have been asked, by Circular Letter N° 39-H of 1926, to revise the lists of gratuitous deliveries to the various organisations of their country.

By Circular Letter N° 8-H of 1927, free deliveries were confined, as a general rule. to organisations or publishers accepting free exchange with their own publications.

Lastly, Circular Letter N° 5-H of 1928 requested Members to revise the lists of free deliveries and of exchange of publications.

A proposal concerning the number of copies to be delivered free of charge to the Hydrographic Offices of the Members will be presented by the Directing Committee at the next Conference (*See* Circular Letter N° 2-R/4-H, 1928).

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## 56. Report on realizable economies.

Publication of this report, requested by the last Conference, was announced in Circular Letter N° 7-H/3-R of 4th May 1928, and has been communicated to the States Members.

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## 57. Inquiry concerning the Seat of the Bureau.

[Page 32]

By letter dated 21st November 1927, States Members were informed of the progress of the inquiry made by the Bureau on the question of the possible transfer of the seat to Malaga and of the subsequent offer of the Government of Monaco to construct suitable premises for the use of the Bureau, which it would enjoy free of charge.

A full report on the subject was communicated to Members with Circular-Letter N° 1-R dated 31st March, 1928.

Circular-Letter N° 4-R 1928 informed Members that Spain, in memory of H. S. H. Prince Albert of Monaco and of the eminent services rendered by this Prince to the science of Hydrography, considers that the honour of being chosen as the seat of the International Hydrographic Bureau belongs without any doubt to the Principality which bears his name and that, therefore, Spain renounces the construction of the edifice offered at Malaga and votes for the choice of the Principality of Monaco as the seat of the Bureau.

By the same letter, the Directing Committee requested the authority of Members to accept the generous offer of the Government of Monaco, described in the above-mentioned report.

The result of the vote favours the retention of the seat of the Bureau at Monaco. It was communicated to the Monegasque Government, which acknowledged the receipt on July 9th 1928, and to the State Members by Circular Letter N° 8-R of 1928.

## 58. Report of Proceedings of the last Conference.

Copies of complete Minutes of Meetings of the Second International Hydrographic Conference were communicated to Members for corrections in January 1927 (C. L. N° 3-H, 1927).

Provisional extracts from the Resolutions and wishes expressed by the Conference appeared in Hydrographic Review Vol. IV, N° 1, page 49.

A small printed collection of extracts from the Minutes of Meetings containing the Resolutions and wishes expressed by the Conference or by the various Committees was forwarded to Members in March 1928.

The full Report of Proceedings with the Minutes of Meetings and all annexed reports were published and sent in July 1928 to the States Members and to the Delegates to the 1926 Conference.

[Page 33] The Directing Committee proposes to place before the Conference a proposal with a view to publishing, for future Conferences, only a summarised Report of Proceedings of meetings, so that publication may be hastened.

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## 59. Publications issued by the Bureau.

By Circular-Letters N° 40-H, 1927, and 43-H, 1927, the Directing Committee proposed to States Members, who have approved the proposal, the publication of a Hydrographic Bulletin which should appear at more frequent intervals than the Review, for subjects of current interest and for information between Offices of a temporary or urgent nature. This publication is intended to render more intimate and more frequent the relations and collaboration between Offices concerning the various questions with which the International Hydrographic Bureau is called upon to deal.

It is also meant to place Members in a better position to follow the work of the International Hydrographic Bureau.

The Directing Committee has issued the Hydrographic Bulletin, monthly, since January 1928. Several circular-letters appear in it.

It has been judged that Special Publications ought to be reserved for the issue of Tables, Lists, Notices, etc., which will not be reproduced in the Review.

At the beginning of 1928 and 1929 a Year-Book was published, so as to group together all the principal items of information relating to the personnel of the Hydrographic Offices.

The Minutes of Meetings giving the Report of Proceedings of the last Conference were published in 1928.

A report on the Work accomplished by the Bureau since the last Conference and a volume containing the proposals submitted to the Supplementary Conference (1929) were published in 1928.

The following Special Publications have been issued : —

| | | |
|---|---|---|
| N° 17 | Safety of Life at Sea | January 1927. |
| N° 18 | List of Life-saving Stations. | March 1927. |
| N° 18 | Revised List of Life-saving Stations. | July 1928. |
| N° 19 | Ocean Currents in relation to Oceanography, Marine Biology, Meteorology and Hydrography | March 1927. |
| N° 20 | List of «P.D.» and «E.D.» shoals and dangers. | January 1928. |
| N° 21 | Tables of Meridional Parts. | December 1928. |
| N° 22 | Manual of Symbols and Abbreviations. | September 1928. |
| N° 23 | Limits of Oceans and Seas. | August 1928. |
| N° 24 | List of Geographical Positions. (Part I.) | March 1929. |
| N° 25 | Catalogue of Original Charts (Seas of Europe) | April 1929. |

Two volumes of the Hydrographic Review were published in 1927 [Page 34] and two volumes of the Hydrographic Review in 1928. The May number of this Review is in the press.

The production of the Bureau may be estimated at about 2800 pages of the dimensions of the Review in 1927 and at about 3000 pages in 1928.

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## 60. Correspondence received and exchanged.

The following table gives the yearly number of letters received and sent since the foundation of the Bureau : —

| Year | Received | Sent | Circular Letters |
|---|---|---|---|
| 1921 ..... | 198 | 253 | 10 |
| 1922 ..... | 782 | 612 | 49-H |
| 1923 ..... | 1102 | 858 | 16-R - 27-H |
| 1924 ..... | 1255 | 1136 | 14-R - 44-H |
| 1925 ..... | 1366 | 1152 | 11-R - 28-H |
| 1926 ..... | 1374 | 1043 | 10-R - 40-H |
| 1927 ..... | 1868 | 1518 | 8-R - 45-H |
| 1928 ..... | 1903 | 1584 | 12-R - 16-H |

N. B. — Acknowledgments of receipt are not included in these figures. Circular-Letters (of which about 50 copies are sent) are counted as a single letter.

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## 61. Distribution, according to their nature, of the various branches of work of the International Hydrographic Bureau among the Directors.

DIRECTOR NIBLACK - PRESIDENT.

Notices to Mariners.
Light Lists.
Sailing Directions.

Meteorology.
Coastal Signals.
Port Signals.
International Signals.
Buoyage.
Safety of Life.
[Page 35] Instruments: — Oceanographic, Hydrographic and Navigational.
Terminology.
Index-charts of original Sailing Directions.
Oceanography.
Delimitation of trade routes and danger zones in much-frequented areas.
Tabulation of Notices to Mariners in the International Code.
Distinguishing signal for surveying vessels.

## DIRECTOR DE VANSSAY DE BLAVOUS.

Charts.
Catalogues and Indexes.
Symbols and Abbreviations.
Original Charts.
Geographical Positions.
Magnetism.
Use of Aircraft.
Depth Contours.

## DIRECTOR TONTA.

Library.
Bibliography.
Navigation.
Soundings.
Phonotelemetry (Sound-ranging).
Harmonic Constants.
Tables of Tides and Currents.
Work carried out and projected.
Visibility of Lights.
Progress of Hydrography.
Catalogue of Hydrographic documents of historical interest.
Study of surveying methods; personnel, types of vessels employed, equipment, recruiting and training personnel.

## SECRETARY GENERAL.

Limits of Oceans and Seas.

The above distribution does not mean that the various branches of work are exclusively confined to any one Director; it is specially intended to ensure that no subject is neglected.

# B. PROPOSALS

MADE BY

## THE STATES MEMBERS

AND BY

## THE DIRECTING COMMITTEE OF THE BUREAU

TO BE SUBMITTED FOR DISCUSSION

AT THE

FIRST SUPPLEMENTARY
INTERNATIONAL HYDROGRAPHIC CONFERENCE
OF 1929

# NOTE.

The Proposals have been divided up, as the annexed List of Proposals indicates, so that they may be easily grouped and distributed among the various Committees which would have to examine them. (This classification is the same as that adopted for the Report on the Work done by the Bureau).

Explanatory notes and more detailed comments relating to certain questions have already been fully published in Hydrographic Bulletin 1928, and will not be reproduced here. References are given in the next.

The subjects marked (A) are those which appeared on the programme of the 2nd International Hydrographic Conference, but which could not then be discussed.

They have been reproduced below, accompanied by the same remarks as in the volume of " Proposals..... 1926. "

The subjects marked (B) are the same as were included in the programme of the 2nd International Hydrographic Conference, but which could not be examined completely during the 1926 session. Among these subjects will be found, in particular, various proposals drawn up by the Committee on Charts and Technical Documents, which have not been ratified by the plenary Conference, and which form the greater part of the questions submitted to the supplementary Conference.

The subjects marked (C) are new questions, raised since the last Conference, and introduced either by States Members or the Directing Committee, before the opening of the Conference. Finally, the subjects marked (D) are those introduced by the Delegates or the Directing Committee during the Conference.

# LIST OF PROPOSALS
## made to the Conference.

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## I. CHARTS.

1. Publication of Lists of Symbols and Abbreviations. (B)
2. International uniformity of Symbols used on all Hydrographic Charts. (C)
3. Symbols for Wireless Stations. (B) (C)
4. Symbols for sunken rocks. (B) (C)
5. Symbols and Conventions for Wrecks. (B) (C)
6. Symbols to denote compulsory seaplane landing-places on marine charts and some other matters concerning Aeronautics. (C)
7. Depth contours and danger line. (B) (C)
8. Various Limits. (C)
9. Indication of channels dredged to a certain depth. (B)
10. Colouring of Light Sectors. (B)
11. Reference to Adjoining Charts. (B)
12. Standardisation of title of charts. (B) (C)
12a. Translation of title of charts. (C)
13. Standardisation of dating of charts. (B)
14. Dimensions of Charts. (B)
15. Scale of Charts. (C)
16. Insertion of meridians and parallels on charts. (C)
16a. True compass roses. (C)
17. Special indication of new parts of exchange copies of corrected charts. (B)
18. Information concerning Dangers marked «P. D.» and «E. D.». (B) (C)
19. Indication on charts of the direction of the buoyage of Channels. (C)
20. Insertion of the date of the latest correction of the chart in catalogues published by National Hydrographic Offices. (B) (C)
21. Original Charts. Publication of a Catalogue of Original Charts. (B) (C)
22. Method of insertion of echo-soundings on charts. Adoption of a Standard Velocity for the propagation of sound in sea water. (C)
23. Collation and publication by the International Hydrographic Bureau of all oceanic soundings.
    Method of recording echo-soundings.
    General Bathymetric Chart of the Oceans. (C)
24 & 24a. Aeronautical Charts. Coastal charts to be used in air navigation published by Hydrographic Offices. (C)
24b. Nautical information concerning canals for inland Navigation. (D)

## II. SAILING DIRECTIONS. - LISTS OF LIGHTS. - AND OTHER NAUTICAL BOOKS.

25. Indication of source and date of information relative to Foreign coasts in National Sailing Directions. (B)
26. Publication of an index-chart of original Sailing Directions. (B)
27. Bearings to be given from seaward in the Lists of Lights. (B)
28. Tabular method of compilation of the Lists of Lights. (B)
29. Notation for distinguishing the characteristics of Lights. (C)
29a. Notation for distinguishing the characteristics of Lights on coastal aviation Charts. (C)
30. Information concerning lists of Signal stations for insertion in the Light Lists. (B) (C)
31 & 31a. International Code Book of Signals. (C)

## III. NOTICES TO MARINERS.

32. Translation into English or French of the first Notice to Mariners of each year issued in a language other than English or French. (B) (C)
33. Period of previous notice to be given before the installation or alteration of aids to navigation. (B)
33a. Notices to Mariners. - Summer time. (C)
34. Mention, in Notices to Mariners, of the intention to issue further Notice on any subject. (B)
35. Notices of a temporary nature. (B)
36 & 36a. Dissemination of Notices abroad and centralisation of Notices in the principal ports. (B) (C)
36b. Mention of original charts in Notices to Mariners. (C)
37. Limits of Oceans and Seas. (B) (C)

## IV. QUESTIONS COMMON TO HYDROGRAPHIC PUBLICATIONS IN GENERAL.

38. Use of English or French in publications other than those in English or French. (B)
39. Copyright of Hydrographic Publications. (B)
40. Overlapping of Hydrographic Publications. (A)
41. Non-Official Publications. (A)
42. Dissemination of nautical information. (A)

## V. MISCELLANEOUS.

43. Unification of the International Notations for Latitudes, Longitudes, etc... (C)
44. Use of the International Ellipsoïd. (C)
45. Adoption of a uniform length for the sea-mile. (C)
46. Geographical Terms used on charts and in Sailing Directions. (C)
47. Standardisation of luminous Time-Signals. (C)
48. Safety Lanes and Danger zones. (B)
48a. Study of Oceanic Currents. (C)

## VI. STATUTES.

49 Conditions to be fulfilled for admission as a Member of the International Hydrographic Bureau (Art. 5b.). (C)
50. Keeping up-to-date of the Table of Tonnages. (Art. 34) (C)
50a. Contribution of the Principality of Monaco. (Art. 35b) (D)
51. Votes of States which are not Members of the Bureau. (Art. 57b.). (C)

## VII. ADMINISTRATION.

52. Revision of the free distribution Lists of publications of the International Hydrographic Bureau. (C)
52a. Exchange of the International Hydrographic Bureau's Publications for those of the Consejo Oceanografico Ibero-Americano. (D)
53. Formation of a Retirement Fund for the Staff of the International Hydrographic Bureau. (C)
54. Report of Proceedings of the Conference. (C)
55. Date of next periodical Conference. (D)

# PROPOSALS
## made to the
## First Supplementary International Hydrographic Conference.

NOTICE : *The paging in the margin is that of the pamphlet distributed before the Conference, and to which it is necessary to refer in order to follow the discussions.*

# I. CHARTS.

## 1. Publication of Lists of Symbols and Abbreviations (B)

[Page 7]

PROPOSAL OF THE 1926 COMMITTEE (to be ratified).

"The Committee considers that the Bureau should prepare an international list of symbols and abbreviations exclusively for the use of mariners, and also another list of Symbols and Abbreviations for the use of cartographers."

*Comments of the Bureau.*

The International Hydrographic Bureau has published an "Abridged Manual of the Symbols and Abbreviations used on Charts." (Special Publication N° 22, September 1928), intended, principally, for the use of mariners. (See preface to this document).

The Conference should decide whether this publication ought to be kept up to date and whether another more complete edition should be considered.

*Documents.* — Abridged Manual of Symbols and Abbreviations (Special Publication N° 22).

*References.* — Report of Proceedings 1926 - pages 372 to 437.

## 2. International uniformity of Symbols used on all Hydrographic Charts. (C)

*Comments of the Bureau :*

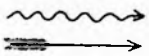
One of the objects of the Bureau, prescribed by Article 6 of the Statutes, is "to endeavour to obtain uniformity, as far as possible, in hydrographic documents."

[Page 8]

There already exists a certain number of symbols for hydrographic charts, adopted by the London Conference, of 1919. Omitting those which may give rise to further discussion, they are :

| OBJECT | DEFINITION OF THE SYMBOL | SYMBOL |
|---|---|---|
| 1. Rock awash. | British symbol shown on diagram D. II annexed to the Report of Proceedings of the International Hydrographic Conference 1919. | |
| 2. Sunken rocks. | Ditto. | |
| 3. Rock or Shoal the position of which is doubtful. | » | P.D. |
| 4. Rock or Shoal the existence of which is doubtful. | » | E.D. |
| 5. Breakers along a shore. | » | |
| 6. Overfalls, Tide Rips. | » | |
| 7. Eddies, Whirlpools. | » | |
| 8. Kelp and Edible Sea Weed. | » | |
| 9. Swamp and Marsh. | » | |
| 10. Depths in which the bottom has not been reached. | » | 70 100 |
| 11. Anchorage for Large Vessels. | » | |
| 12. Anchorage for Small Vessels. | » | |
| 13. Fishing Stakes. | » | |
| 14. Light Vessels. | » | |

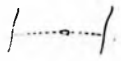
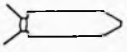
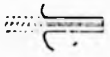
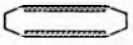
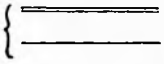
[Page 9]

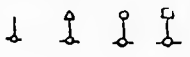
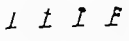
| OBJECT | DEFINITION OF THE SYMBOL | SYMBOL |
|---|---|---|
| 15. Lighthouses. | British symbol shown of diagram D. II annexed to the Report of Proceedings of the International Hydrographic Conference 1929. | ★ * • |
| 16. Churches and other conspicuous objects. | (They will be drawn on the charts showing the appearance as visible from seaward.) | |
| 17. Tracks. | This question does not seem to be completely settled: *See* Abridged Manual of Symbols, sheet 2. N° 20 and 21. | |
| 18. Currents - general. | British symbols shown on diagram D. II annexed to the Report of Proceedings of the International Hydrographic Conference 1919. |  |
| 19. Flood Tide Stream. | » |  |
| 20. Ebb Tide Stream. | » |  |
| 21. Triangulation Station. | » | △ |
| 22. Telegraph Cables. | French symbol (*see* Ouvrage S.H. N° 47, Paris.) |  |
| 23. Buoys. | (They will be shown pictorially on the charts). | |
| 24. Beacons. | » | |
| 25. Leader Cable. | Agreement obtained by I. H. B. - Circular letter N° 9 H. 1923 and 27 H. - 1923. | = = = = = |

Moreover, symbols denoting the following objects are almost identical on all marine charts, and the Bureau proposes to the Conference that it adopt, in particular, those which are indicated in the column of the Abridged Manual of Symbols represented below, to settle the form of the symbols.

| OBJECT | DEFINITION OF THE SYMBOL | SYMBOL |
|---|---|---|
| 1. Mines - Quarries. | Column - Greece. | ⚒ |
| 2. Observation Spot. | Column - Great Britain. | (thick lines) + |

[Page 10]

| OBJECT | DEFINITION OF THE SYMBOL | SYMBOL |
|---|---|---|
| 3. Ferry. | French symbol. |  |
| 4. Church. | General symbol. | (thin lines)  |
| 5. Temple - Pagoda. | British symbol. |  |
| 6. Mosque - Minaret - Marabout. | British and Grecian symbol. |  |
| 7. Windmill. | French symbol. |  |
| 8. Watermill. | French symbol. |  |
| 9. Fort. | General symbol. |  |
| 10. Battery. | General symbol. |  |
| 11. Dry dock. | British symbol. |  |
| 12. Patent slip. | British symbol. |  |
| 13. Floating dock. | French symbol. |  |
| 14. Leading lines. | (Ships should not proceed on the dotted line). |  |
| 15. Course or channel recommended. | General symbols. |  |
| 16. Ice limits. | Russian symbol. |  |
| 17. Any kind of station. | British & German symbol. |  |
| 18. Semaphore. | French symbol. |  |
| 19. Signal station. | French symbol. |  |
| 20. Telegraph station. | Italian symbol. |  |
| 21. Fish weir. | Spanish symbol. |  |

| OBJECT | DEFINITION OF THE SYMBOL | SYMBOL |
|---|---|---|
| 22. Fixed Beacon. | British symbol. |  |
| 23. Floating Beacon | French - German & Netherlands symbol. |  |
| 24. Light Beacon. | Brazilian symbol. |  |
| 25. Lightbuoys. | Swedish symbols. |  |
| 26. Light vessel with Submarine Bell. | United States symbol. |  |
| 27. Chimney - tower. | (or in elevation). |  |
| 28. Bench mark. | British symbol. |  |

*Proposal of the Bureau.*

The Bureau proposes that the Conference adopt the above symbols.

*References.* — Report of Proceedings - London 1919 - pages 23, 24, 25, 26.

Abridged Manual of Symbols and Abbreviations (Special Publication N° 22).

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## 3. Symbols for Wireless Stations. (B) (C)

Proposal of the 1926 Committee (to be ratified).

The Committee adopted the following symbol and letter :

$\oplus_R$

Neither symbol nor letter should be coloured

The legend which should follow the letter R has been left to the initiative of each country.

Complementary proposal by Germany.

Germany proposes that, wireless stations of any description being designated on charts by means of the abbreviation :

R (R = Radio);

[Page 12] the legend should be completed as follows when these wireless stations serve for wireless bearings :

1° the wireless bearing is taken from the land :

R G. (G = Gonio);

2° the bearing is taken from the ship :

*a*) with a deck radio direction finder, receiving signals emitted by a *circular radio beacon:*

R C. (C = Circular);

*b*) with an ordinary listening receiver, receiving signals of defined characteristics or cadences emitted by a directional *radio beacon:*

R D. (D = Directional).

*Explanatory notes.* — (See Bulletin N° VI - 1928 - page 151).

The Bureau points out that the German proposal is not in contradiction with the resolution of 1926 which admits that the letter R may be followed by any such legend as may be desired.

The letters G, C and D proposed by Germany, seem to the Bureau to be very judiciously chosen if the contrivances in present use be considered ; but it fears that these contrivances may pass through a period of rapid transformation, which may perhaps render premature the definite adoption of letters for international use.

*Document.* — Bulletin N° VI - 1928 - page 151.

*References.* — Report of Proceedings 1926 - pages 377, 386, 405.

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## 4. Symbols for sunken rocks. (B) (C)

PROPOSAL OF THE 1926 COMMITTEE (to be ratified).

The Committee decided to use the symbol for sunken rocks of small area (pinnacles), to a depth of 10 metres, the depth being indicated by a number placed at the side of the symbol, as follows :




(The numeral should be of a different printing type from that of the soundings on the chart).

*Modification proposed by the Netherlands :*

[Page 13]

The Netherlands propose the following wording :

" The following symbol shall be used for sunken rocks of small area (pinnacles), to a depth of 10 metres. If it is desired to insert the exact depth, this depth shall be indicated by a number placed at the side of the symbol, as follows :




(the numeral should be of a different printing type from that of the soundings on the chart)".

*Opinion of the Bureau :*

The Bureau recalls that the London Conference adopted the following decision :

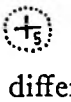
" *Sunken Rocks.* — It is agreed to adopt the symbol  for rocks with a depth of 6 feet, or 2 metres, or less over them at Low Water, or for any rock over which the depth is unknown or where it is undesirable to insert the depth over it, owing to the scale of the chart being too small. "

The proposal below slightly modifies this decision. It appears necessary to the Bureau that the text concerning this question be written out more fully. It proposes :

" It is agreed to adopt the symbol  for a rock of small area (pinnacle) with depths of 10 metres or less over it at Low Water.

" The symbol, alone, shall be used for a rock over which the depth is less than 2 metres at Low Water, or for a rock over which the depth is unknown, or if the scale of the chart is too small to insert the depth.

" If it is desired to insert the exact depth, this depth shall be indicated by a number placed inside the symbol, as follows :




(The numeral should be of a different printing type from that of the soundings on the chart)."

*References.* — Report of Proceedings - London - 1919 p. 62.
Report of Proceedings - Monaco - 1926, p. 377-381.

[Page 14]

## 5. Symbols and Conventions for Wrecks. (B) (C)

PROPOSAL OF THE 1926 COMMITTEE (to be ratified).

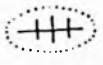
1. Wrecks which lie in positions where the depth of water exceeds 200 metres (110 fathoms) will not be shown on the charts.

2. In positions where the depth of water does not exceed 200 metres (110 fathoms) wrecks will be classified and charted as follows :

*a*) Wrecks showing any portion of the hull or superstructure above low water will be shown on all appropriate charts by the following symbol without the word Wreck or the date :



*b*) Sunken wrecks which are dangerous to surface navigation will be shown thus :



*c*) Sunken wrecks which are not dangerous to surface navigation will be shown thus :



the limiting depth between *b* and *c* being 8 fathoms or 15 metres.

*d*) Remains of a wreck no longer a danger to surface navigation, but to be avoided by vessels anchoring or trawling, will be shown on the largest scale chart only, by the symbol :  foul (or the translation of the world " foul " in the language desired).

(*This last proposal received an equal number of votes, 7 for and 7 against. It was referred to the Plenary Session*).

3. On the largest scale chart, the date (year) of the wreck will be inserted when known, if the clearness of the chart is not affected thereby.

4. On smaller scale charts, wrecks will not invariably be shown in the waters covered by larger scale charts, except when they are dangerous to navigation. When necessary, a note to this effect will be inserted on the chart.

5. Doubtful wrecks will be marked on large scale charts with the notes " E. D. ", " P. D. ", or " P. A. ", which signify: " Existence Doubtful ", " Position Doubtful " or " Position Approximate " as necessary, in order to differentiate them from wrecks the particulars of which are authentically known.

6. The position of the centre of the wreck will be indicated in the case of 2 (*a*) by a small circle on the waterline at the base of the mast ; in the cases of 2 (*b*) and (*c*) by the intersection of the horizontal line and the middle vertical line, whilst in the case of 2 (*d*) it is the centre of the dotted circle. [Page 15]

7. Dangerous wrecks should be shown on all appropriate charts taking due account of the scale. It is evident that such wrecks cannot be shown on very small scale charts.

*Observations of the Netherlands :*

2. The Netherlands see no reason for making a difference between (c) and (d) — Both should be shown by the symbol (c).

3. It seems superfluous to show the date (year) of the wreck on any kind of chart.

5. The Netherlands asked that the wording of this paragraph should be modified by adding after " E. D. ", " P. D. " or " P. A. ": " or their translation in the language of the country which publishes the chart. "

*Opinion of the Directing Committee :*

The Directing Committee considers that paragraph (d) might be written out thus :

> " When it is necessary to notify a mariner that, in a particular position, he has to beware of the nature of the bottom, either on account of the presence of the remains of a wreck, which is no longer a danger to any kind of navigation, or for any other cause, the symbol used will be.
>
>  Foul
>
> (or the translation of the word «Foul» in the language desired).

It considers, in fact, that the symbol " Foul " ought not to be considered as solely applicable to remains of wrecks but that it should be permissible to use it on charts wherever it is necessary to notify the mariner that he has to beware of the nature of the bottom, in a particular position.

It considers :—

that no inconvenience will be caused by inserting the date of the wreck on a chart if the clearness of the chart does not suffer thereby;

that the proposal of the Netherlands, relating to the abbreviations " E. D. ", " P. D. ", " P. A. ", athough in accordance with the London resolution, seems to be opposed to the desired unification of the abbreviations; an inspection of the columns of the Manual of Symbols shows that a great number of countries already use the abbreviations " E. D. ", " P. D. " and " P. A. " on their charts.

*References.* — Report of Proceedings - pages 386, 391, 425.

[Page 16]

## 6. Symbols to denote compulsory seaplane landing-places on marine charts and some other matters concerning Aeronautics. (C)

This question appears in Bulletin N° IV - 1928, pages 91 to 97.

It appears to the Directing Committee that it is not necessary, at the present time, to adopt special symbols to denote landing-places, buoys, sheds, hangers, mooring masts, radio-telegraphic pylons, etc., reserved for air-craft.

Symbols exist in each country to denote on marine charts the anchorages, mooring buoys, boat sheds, hangers, masts and pylons which might serve as marks ; the Bureau, therefore, confines itself to making the following proposal :

PROPOSAL OF THE BUREAU :

The Bureau proposes that the next Conference should decide that, wherever possible, a pair of wings be added to the symbols and that it would seem advantageous to indicate that these objects are reserved for air-craft. (This sign is almost universally used to characterize aviation, it does not seem that it could lead to confusion.

The limits of airports might be indicated in the same way as other limits, but the lines between them separated by a pair of wings. (*See* proposal N° 8 for the limits).

*Documents.* — Table of Symbols of Aeronautic Charts.
Bulletin N° IV - 1928 - p. 91 to 97 ; N° VI, page 150.
Hydrographic Review Vol. V, N° 2, page 198.

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## 7. Depth contours and danger line. (B) (C)

PROPOSAL OF NORWAY.

" Regarding depth contours it is proposed that uniformity shall be obtained at all events for every 10 metres or 10 fathoms in depths from 10 to 50 metres or fathoms. "

*Explanatory Notes :*

Being of the opinion that it is impossible that each country in each case can use the same conventional sign — the same line — to indicate the same depth, because the features and conditions of the coast often are so totally unequal to each other, I maintain that a standardisation on this subject is obtainable only to a certain limited extent.

In sheltered waters with lesser depths, there will always be special coastal features to take into consideration and according to my best conviction, it will be impossible to arrive at full agreement on this subject. Experience shows that this question has always been extremely difficult to solve — the essential reason quite naturally has been that it involves too great sacrifices from most of the States. [Page 17]

But, as suggested, I regard it both feasible and practical to obtain uniformity to a certain extent — and this will no doubt be a good step towards standardisation on this very important subject ; and it may be realised without any great sacrifices from the different States. My principle has as its object that in this connection it amounts to the same *whether metres or fathoms are used,* the same system being applicable in both cases : one broken line and one dot — · — · — · — = 10 fathoms or metres, one broken line and two dots — ·· — ·· — ·· — = 20 fathoms or metres and so on to 50 metres or fathoms. But those nations whose coasts are very complicated and cut up must have the right to use a simple dotted line for 10 metres as the proposed system possibly would not be flexible enough.

*Comments of the Bureau :*

The first International Hydrographic Conference of 1919 adopted the following resolution (*see* page 24 of the Report) :

> " It is agreed that it is desirable to adopt common symbols to indicate " the depth contours on charts produced by those nations using the " metric system. It was found impossible to arrive at an agreement " as to the symbols to be used and it was decided to refer the matter " for discussion to the International Hydrographic Bureau, when " formed. "

In compliance with this resolution, the Directing Committee submitted to the States Members Circular-Letters N$^{os}$ 32 H-1922 and 36 H-1924, which contained a draft of a system of depth contours, and reproduced the observations made by the States Members (*See* Report on the Work Done by the Bureau from June 1921 to April 1926 ; pages 9 to 15).

The Directing Committee, in proposing this matter for discussion at the International Conference of 1926, presented a new draft of a system of depth contours. (*See* proposals made in 1926 - pages 9 to 11).

The Committee on Charts and Technical documents examined the proposals of the Bureau, and other proposals which were drawn up by certain States Members (*See* Report of the Conference, p. 397, 401, and 437).

*a*) The Committee realised, firstly, that great latitude should be reserved to the Hydrographic Offices concerned as to the number of contour lines to be placed on the charts. They should employ only those which they consider useful, but should select them in accordance with the uniform system of lines which will be adopted.

[Page 18] *b*) The Committee next discussed the "*general danger line*".

The Committee adopted this expression to denote, not a contour line, but a fixed line, enclosing a part of the sea which mariners should avoid altogether (whatever the draught of water of their ship) on account of the great number of obstacles to navigation.

It adopted the symbol, which was already used by Great Britain and several other nations for this line ; that is to say, a line of dots.

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This symbol is also used by several nations to denote the 1 metre line, and the Bureau will propose hereafter its adoption to represent that contour line. It does not seem probable that confusion can result, especially as the 1 metre contour line will probably be rarely used ; and besides, even if there is confusion, no serious inconvenience can result.

*c*) Concerning the tracing of the 5 metre contour line, the Committee considered that this line, on account of its importance, ought to stand out more clearly than the others. It appeared to prefer a line formed of short heavy dashes.

*d*) The Committee considered it was not necessary to establish a special line to represent each metre of depth between 20 and 50 metres.

The Bureau, however, proposes hereafter a system of lines, as complete as possible, between 10 and 20 metres. It seems, in fact, that the submarine relief in these depths will soon be known, thanks to echo sounding, with much greater accuracy than it is at the present moment ; it would be of interest, either for sub-marine navigation or for fixing the position by sounding, to show some details of this relief, by means of special contour lines which do not correspond to tens of metres. Moreover, admitting the principle that each country will use only those lines which seem to it the most convenient, no inconvenience can be caused by allowing for a greater number of symbols

*e*) The Committee decided that no figure should be shown against the depth contours.

*f*) The Committee admitted that there was no objection to the insertion of dotted lines between the other lines to represent half metres, but this procedure should be used only when it is absolutely necessary.

*g*) The Committee, recognising the necessity of adopting a uniform system of depth contours, requested the Bureau to re-examine the question, and submit new proposals. It pointed out the importance of the 200 metre line.

Although the decisions of the Committee on Charts and Technical documents have not been submitted for ratification by a plenary session, the Bureau has taken them into account very largely in making out the required scheme.

The Bureau desires to emphasize the great importance to navigation [Page 19] of the 5, 10 and 20 metre lines *. Firstly, it proposes to settle the symbols of the 5, 10, 20, 100 and 1.000 metre lines. An important step forward towards unification would be made if an agreement were reached on this point. The Bureau proposes, for the above five lines, symbols, as simple as possible, and conforming to those which have been adopted on many charts.

The symbols proposed for the other lines are derived from precedents; it seemed convenient to make as complete a table as possible of them. The greater the amount of use made of the lines which the symbols represent, the more simple, are the symbols. There is a certain advantage in representing the lines which are seldom traced by rather more complex symbols, which would attract attention in special cases or when any particular circumstance had led to their use.

PROPOSAL OF THE BUREAU :

1) The 5, 10 and 20 metre lines should be traced on the chart whenever the scale and the nature of the bottom permit it.

2) Any contour line (which seems of particular importance on a given chart), may be made more easily visible by the addition of two lines of small dots on the side of the lesser soundings.

3) The 5 metre line should be formed by a series of fairly heavy short dashes, about 1 $^{m}/_{m}$ in length, separated by an interval shorter than the dashes.

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(*) All the instructions concerning the use of charts which are published by various countries draw the attention of mariners to the precautions which certain fathom lines necessitate, and are, on this subject, quite in agreement with the following information given in the British Sailing Directions, by replacing, when necessary, 6 fathoms and 10 fathoms by 10 and 20 metres :

*Fathom Lines a Caution.* — Except in plans of harbours that have been surveyed in detail, the six-fathom line on most Admiralty charts is to be considered as a caution or danger line against unnecessarily approaching the shore or bank within that line, on account of the possibility of the existence of undiscovered inequalities of the bottom,, which nothing but an elaborate detailed survey could reveal. In general surveys of coasts or little frequented anchorages, the necessities of navigation do not demand the great expenditure of time required for such a detailed survey. It is not contemplated that ships will approach the shore in such localities without taking special precautions. The ten-fathom line is, on rocky shores, another warning, especially for ships of heavy draught.

Charts where no fathom lines are marked must be especially regarded with caution, as it generally means that soundings were too scanty and the bottom too uneven to enable them to be drawn with accuracy.

[Page 20] 4) The 10 metre line should be formed by a series of fine short dashes, about 1. 5 $^{m}/_{m}$ in length, and separated by a very short interval.

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5) The 20 metre line should be formed by short fine dashes, about 3 $^{m}/_{m}$ in length, separated by two small dots.

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6) The 100 metre line should be formed by a series of fine dashes, about 5 $^{m}/_{m}$ in length.

---

7) The 1,000 metre line should be formed by a series of fine dashes, about 8 $^{m}/_{m}$ in length.

---

8) The symbol of the 1 metre line should be a series of small dots close together.

.....

For the following lines, up to and including 9 metres, the dots should be grouped, the number in each group indicating the number of metres, and five dots replaced by the characteristic dashes of the 5 metre line.

..... 2 m.

..... 3 m.

——————— 6 m.

——————— 9 m.

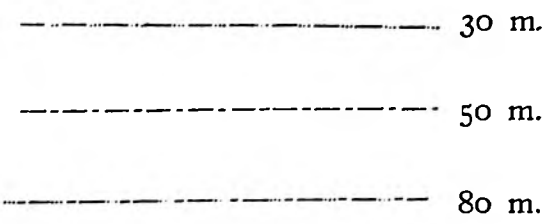
9) The 11 to 19 metre lines, inclusive, should be formed by a series of short dashes, similar to those of the 10 metre line, separated by as many dots as there are metres over 10, five dots being replaced by the characteristic dashes of the 5 metre line.

— — — — — — — — — — 11 m.

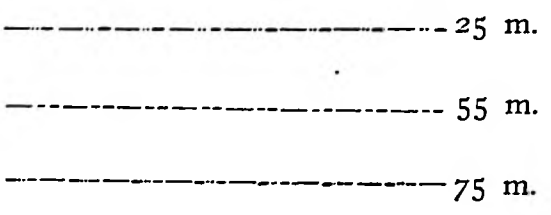
---------- 15 m.

— — — — — — — — — — 17 m.

10) Lines corresponding to tens of metres, between 20 and 90 inclusive, are formed by short fine dashes, 3 m/m in length, separated by as many dots as there are tens of metres, five dots being replaced by a fine dash 1 m/m in length. [Page 21]




The 25 metre lines, 35 metres....95 metres might also be formed by adding on the right of the dots or of the dash indicating the tens, the characteristic dash of the 5 metre line.




11) The lines corresponding to tens of metres between 100 and 200 metres, and to the multiples of 50 metres, between 200 and 950 metres inclusive, are the same as those which correspond to depths ten times less, except that the fine dashes of 1.5 or 3 m/m in length, are replaced by fine dashes 5 m/m in length.

12) Lines corresponding to the multiples of 500 metres are the same as the preceding, except that the fine dashes of 5 m/m in length are replaced by fine dashes of 8 m/m length.

13) To prevent confusion between contour lines and those which indicate the limits of dredged areas, dumping grounds, limits of ports, customs, etc., the limits of these zones are represented by fine dashes 12 m/m in length.

*See* " Manual of Symbols " — plate 6.

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## 8. Various Limits. (C)

PROPOSAL OF THE BUREAU :

The Bureau proposes that the following symbols be adopted to show certain limits on the charts.

1) Limits of fishing zones 

[Page 22]

2) Limits of air ports 

3) Maritime limits in general: Reserved areas, dumping grounds, Cotidal lines, lines of the turn of currents, etc. 

(fine lines 12 m/m in length).

*Comments of the Bureau :*

(1) *See* Bulletin N° 1 - 1928 - page 16.

(2) *See* Bulletin N° IV - 1928 - page 97 - paragraph 4, last phrase.

(3) *See* preceding Proposal N° 7 - paragraph 13.

PROPOSAL BY GERMANY :

To investigate the possibility and means of showing sea limits of various kinds on charts.

*Explanatory Note :*

It would, in many cases, be a great aid to navigators to know the several limits of interest to fisheries and commerce, and to have charts showing such limits.

On account of the judicial character of the matter, the Second International Hydrographic Conference thought it undesirable to show such limits on charts before diplomatic authorities had established the extent of the territorial waters.

The question of sea limits has been taken up by the League of Nations and probably the legal status of territorial waters will soon become codified.

In order to facilitate the work of the relevant committee, it would seem to be of great interest to be clear beforehand as to the technical and cartographic possibility and means of showing sea limits on charts.

A special investigation perhaps might avoid sea limits becoming attached to changing and shifting sand banks which would render it almost impossible to show cartographically the limits in their true position always. It appears especially necessary to have the consent of the Hydrographic Offices as to how many limits (territorial fishing, customs, etc.), can be shown on charts without disturbing their clearness.

## 9. Indication of Channels dredged to a certain depth. (B)

[Page 23]

PROPOSAL OF THE 1926 COMMITTEE (to be ratified).

The Committee recommended :

" that channels which have been *dredged* to a certain depth should be especially indicated as such whenever the scale of the chart permits it, with a note giving the *method of dredging* and the depth.

" The following information should be inserted in the Sailing Directions also :

" Channel dredged to.....metres depth,
" In the year....."

*Opinion of the Directing Committee.*

Agreed.

*References.* — Report of the Proceedings 1926 - page 388.

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## 10. Colouring of Light Sectors. (B)

PROPOSAL OF THE 1926 COMMITTEE (to be ratified).

The Committee pointed out that :

" it is desirable that those States which can do so, should colour their charts in order to indicate the colours of the light sectors, in view of the fact that this method is practically perfect. "

*Opinion of the Directing Committee.*

Agreed.

*Reference.* — Report of the Proceedings 1926 - page 400.

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## 11. Reference to Adjoining Charts. (B)

[Page 24]

PROPOSAL OF THE 1926 COMMITTEE (to be ratified).

The Committee considered that it would be advisable to adopt the rule that the numbers of adjacent charts should be indicated in the appropriate positions, or in case of complex arrangement, a skeleton index should be given.

*Opinion of the Directing Committee.*

Agreed.

This arrangement would also facilitate any eventual correction of similar parts of adjoining charts (see under " Publications in General " N° 40).

*Reference.* — Report of Proceedings 1926 - page 408.

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## 12. Standardisation of title of charts. (B) (C)

PROPOSAL OF THE 1926 COMMITTEE (to be ratified).

The Committee on Charts recommended the following provisions :

1° " that a geographical position should be given on plans and charts which are not graduated and that, with regard to graduated plans and charts, a simple reference as to the origin should be given.

2° " that the date of the survey be shown on charts ;

3° " that it be left to each nation to decide whether the names of ships and officers who took part in the survey should be mentioned ;

4° " that when a country invariably uses the metre, it is unnecessary to mention the unit of measurement of depths ;

5° " that a table of symbols need not be shown on the charts;

6° " that magnetic variation should be omitted from the title when it is shown against the compass rose ;

7° " that whenever the projection is not Mercator's projection, this should be mentioned on the chart ;

8° " that the authority, date of surveys and foreign charts used, together with their numbers when possible, should be mentioned ;

[Page 25] 9° " that for nations which do not use the latin alphabet, an additional title of the chart should be printed in Roman characters ;

10° " that the enumeration of conspicuous objects is desirable on large scale charts.

The question as to whether the sketches of conspicuous objects or a simple list of these should be inserted on large scale charts was decided in favour of giving the list only.

11° " that the variation obtained by accurate magnetic observations, made at places near the coast and which may be useful to seamen, should be mentioned on the charts near such places or in the title. "

*Observations made by the Netherlands :*

3° The Netherlands are desirous to see the following addition made to this paragraph : — " The title should in any case show whether the survey was executed by expert surveyors or not. "

4° The Netherlands are quite opposed to this paragraph. It should be remembered that the charts will be used by foreigners and it cannot be expected that every seaman knows exactly which nations use metres or fathoms, although he may know it for his own country. It is therefore essential that the system used should be shown in the title, and that there should never be any doubt about it.

10° The Netherlands consider that the enumeration of conspicuous objects appears to be superfluous.

*Opinion of the Bureau :*

The Directing Committee agrees with the opinion developed by the Netherlands under remark (4°). It deems, furthermore, indispensable that the title of every chart should specify clearly the unit employed.

*References.* — Report of Proceedings 1926 - page 409 - 415.

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## 12a. Translation of title of charts. (C)

A certain number of countries give the translation into English or French of the title of their charts under this title, as well as the translation of certain important information.

This method requires considerable increase in the space for the title and may necessitate considerable retouching of the engraving.

The Directing Committee considers that the same object could be attained without affecting the chart itself, by printing such translations on a slip which could be pasted on the back of the chart.

The adoption of this system would facilitate the use of original charts

With this object in view, it makes the following proposal : —

PROPOSAL OF THE BUREAU :

If the translation into English or into French of the title and of the more important information required for reading the chart cannot be inserted on the chart, it should be printed on a slip and pasted on the back of the chart.

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## 13. Standardisation of dating of charts. (B)

PROPOSAL OF THE 1926 COMMITTEE (to be ratified).

The Committee decided to examine the question only as to the dates which should be mentioned on the charts and not as to the part of the chart where these should appear.

[Page 26] The Committee approved the proposal that the month and year of publication should be inserted on charts.

The Committee approved also a proposal to insert the month and year of publication of a new edition which replaces and cancels previous editions.

The Committee rejected the motion " that reprints, without new corrections. issued between the first publication and new editions, or between two new editions in order to complete the stock, should show the month and the year with the words " no new corrections. "

The Committee decided :

" that charts should be brought up-to-date to the day when they leave the Hydrographic Office ";

" that the date of correction by the Hydrographic Office should be shown on the charts " ;

" that charts should bear the date to which they have been corrected by the agent who sells them after they have left the Hydrographic Office. "

*Opinion of the Directing Committee.*

Agreed.

*References.* — Report of Proceedings 1926 - page 415.

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## 14. Dimensions of Charts. (B)

PROPOSAL OF 1926 COMMITTEE (to be ratified).

The Committee decided :

" that all countries should be asked to quote the dimensions between the inner border lines of their charts so that full use can be made of the material when used for compilation purposes. This applies especially to charts and plans which are not graduated. "

*Opinion of the Directing Committee :*

Agreed.

*Reference.* — Report of Proceedings 1926 - page 421.

## 15. Scale of Charts. (C)

[Page 27]

Proposal made by Greece.

Greece recommends the use of decimal scales for large scale charts (up to 1 : 50.000).

For charts on Mercator's projection, scale of the middle latitude of the chart.

For example the following scales :

1 : 5.000 - 1 : 10.000 - 1 : 12.500 - 1 : 20.000 - 1 : 25.000 - 1 : 40.000 1 : 50.000 - 1 : 75.000 - 1 : 100.000 - 1 : 125.000 - 1 : 200.000 - 1 : 250.000 1 : 400.000 - 1 : 500.000 - 1 : 1.000.000, etc...

*Explanatory Note : —*

The adoption of decimal scales is advantageous for several reasons. Above all, it will enable mariners to use the decimetre for measuring distances in metres, will facilitate the work of chart construction, and will provide the means of obtaining greater accuracy for connecting together charts on different scales.

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## 16. Insertion of meridians and parallels on Charts. (C)

Proposal of the Directing Committee :

A sufficient number of meridians and parallels should be drawn on all charts published by Hydrographic Offices, whatever the scale or system of projection may be, so that it may always be possible to place a position on the chart by its geographic co-ordinates.

*Comments of the Bureau :*

The Directing Committee considers that the adoption of this resolution will greatly facilitate, for the mariner, the *transfer* from one chart to another.

This transfer is rather difficult when one of the charts is not divided by meridians and parallels, for it then becomes necessary to draw a common line of bearing on the two charts, and to measure a distance.

Moreover, the drawing up of Notices to Mariners, explaining the [Page 28] corrections to be applied to charts, will be greatly facilitated and unified if an object can always be distinguished by its geographical position.

The Directing Committee is aware that geographical positions sometimes differ for points common to adjoining charts, but this fact occurs also on charts which have meridians and parallels on them, and it is customary to rectify the resulting error.

## 16a. True compass roses. (C)

At the London Conference 1922 (See Report of Proceedings, page 28) it was agreed : —

> " to accept the true circle as shown on the plan submitted by the British Hydrographic Department..."

Certain countries, however, have not adopted this system because their seamen are more inclined to use the protractor than parallel rulers. But this makes their charts more difficult to use for those seamen who do not employ the protractor. It is suggested that those countries which do not show a true compass rose on their charts should issue to seamen such roses printed on thin transparent paper, which can easily be stuck on to the charts.

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## 17. Special indication of new parts of exchange copies of corrected charts. (B)

PROPOSAL OF 1926 COMMITTEE (to be ratified).

The Committee proposed :

" that the new part on exchange copies of corrected charts should be specially indicated by a light-blue wash. "

*Remarks of the Directing Committee :*

A certain number of countries have already put this resolution into effect. The Directing Committee therefore recommends its adoption.

*References.* — Report of Proceedings 1926, page 422.

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## 18. Information concerning Dangers marked 'P.D.' and 'E.D,' (B) (C)

PROPOSAL OF 1926 COMMITTEE (to be ratified).

The Committee voted on the following proposal : —

" The International Hydrographic Bureau is requested to draw up a list of dangers marked " P. D. " and " E. D. " on charts, each being accompanied by a short historical note. All States are invited to provide the Bureau with the information necessary for the preparation of this list. "

No decision was reached as 6 voted for and 6 against the proposal and 1 abstained from voting.

This list has been published. (Special Publication N° 20 - January 1928). [Page 29]

The aim of the Publication and the manner in which it should be kept up to date is stated in the Foreword of Special Publication N° 20.

*Comments of the Bureau :*

The Bureau proposes that the Conference should approve of this information being published in the form of leaflets which give details of the researches made, and recapitulatory lists kept up to date by supplements.

*Documents.* — Special Publication N° 20, 3 Supplements and Slips.

*References.* — Report of the Proceedings 1926 - p. 422.

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## 19. Indication on charts of the direction of the buoyage of Channels. (C)

PROPOSAL MADE BY GREECE.

Greece proposes, that the system used for the buoyage and lighting of estuaries and difficult passages, should be indicated, by inscribing on the charts one of the following remarks :

A) " Normal colouring " (of the buoyage or lighting) when the red should be left on the left side when entering.

B) " Contrary colouring " (of the buoyage or lighting) when the red should be left on the left when leaving.

*Explanatory Note : —*

On charts representing estuaries — and in general difficult passages, when the inscription of all the necessary information concerning the buoyage and lighting impairs the clearness of the chart, which must be avoided, this information should be given by a concise phrase which at the same time demonstrates the system used. We propose therefore to establish the terms :

A) *Normal colouring* (of the buoyage or lighting) when the red should be left on the left side when entering.

B) *Contrary colouring* (of the buoyage or lighting) when the red should be left on the left when leaving.

The principles on which this designation ought to be based should agree (1) with the various systems actually in use ; (2) with the recommen-

[Page 30] dations of the Technical Sub-Committee for Buoyage and Lighting of Coasts the Permanent Committee of Ports and Maritime Navigation of the League of Nations. Since in every system the colour red is always used to indicate one of the two sides of a strait or estuary, the description of the systems will be based provisionally upon what red indicates in the system.

PROPOSAL OF THE BUREAU :

When the scale of the chart permits, and when the intricacies of the channels require it, the direction of the buoyage of channels should be indicated on the chart by means of an arrow.

A note. conspicuously placed on the chart, will give conclusive information on the system of buoyage and arrow used.

*Comments of the Bureau :*

In the system of buoyage called " lateral system " the direction of the buoyage is based on the hypothesis of a mariner coming from seaward, but this is not always apparent from the direct inspection of the chart, in the case when the entrance channels to the port are many or intricate.

The Buoyage Conference of Stockholm 1926, expressed a wish that the direction of the buoyage should be indicated, if possible, on the charts, whenever there might be any ambiguity for the mariner.

The Danish Hydrographic Office uses this system of indication on its charts.

The Bureau proposes that the Conference recommend that this indication should be used on large scale charts, whenever it is possible or advantageous.

*References.* — Hydrographic Review Vol. IV - N° 2, page 218.
Danish Chart N° 303 - 296.

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## 20. Insertion of the date of the latest correction of the chart in catalogues published by National Hydrographic Offices. (B) (C)

OPINION OF THE 1926 COMMITTEE.

The opinion of the Committee was : —

" that the insertion by the Hydrographic Offices of a column in their Catalogues of Charts, which mentions the month and year of the latest small correction, may be useful, but not indispensable. "

*Comments of the Bureau :* [Page 31]

This indication is found on the charts themselves. The catalogue cannot be published several times a year. Hence only the date of the latest correction, up to the time of the publication of the catalogue, can be indicated ; after a very short time, this information will be worthless for charts which have to be frequently corrected. But it is precisely for these charts that this information would be most useful. The Committee considers. therefore, that the proposed insertion is of little use.

*References.* — Report of Proceedings - 1926 - page 438.

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## 21. Original Charts.
## Publication of a Catalogue of Original Charts. (B) (C)

OPINION OF 1926 COMMITTEE.

1° "The Committee considers it of the highest importance that the question of original charts should be thoroughly examined by the I. H. B. in order to allow these charts to come into general use. The Committee considered it advisable that practical experiments should be carried out by the nations concerned, in well-defined zones, where geographical circumstances allow, and the experiments should be made on the basis of the principles used by Holland in 1925."

2° "The Committee decided to refer the publication of this Catalogue to the International Hydrographic Bureau."

*Comments of the Bureau :*

The Bureau has drawn up the Catalogue of Original charts for the European seas. This catalogue is now being printed (Special Publication N° 25). Some of the sheets will be submitted to the Conference which will express its opinion as to modifications which might be made in the Catalogue dealing with other seas.

In order to complete the information given in the Catalogue, the Bureau intends, in the near future, to give to each original chart in a special column of the Catalogue, a suitable sign for indicating briefly the nature of the surveys used for the preparation of the chart. This will constitute a useful contribution to the study of hydrography.

For example : * rapid reconnaissances ;
** partial surveys, incompletely or superficially examined.
*** Complete surveys based on correct triangulation and checked, if necessary, by sweeping.

[Page 32] Further, when the surveyed areas are subject to rapid changes owing to shifting bottoms, the asterisks will be put between brackets.

(*See:* Report on the Work Done by the Bureau, N° 3 and 4).

*Reference.* — Report of Proceedings 1926 - pages 426, 438. - Special Publication N° 25.

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## 22. Method of insertion of echo-soundings on charts. Adoption of a Standard Velocity for the propagation of sound in sea water. (C)

PROPOSAL BY GERMANY :

Germany has suggested that it seems to be desirable to take, as an international basis, the same value of velocity of sound for all echo-distances which are to be plotted on charts, and as echo-distances may differ from the true depths it must be possible to distinguish them on charts from depths taken with the lead, by inserting them on the charts with a special form of printed figures.

These suggestions gave rise to the following Proposals :

(a) that depths obtained by echo-sounding be inserted on marine charts as being the product of observed times, required by the echo, with a normal and constant sound velocity. (For German charts this value has been fixed at 1.490 met. sec.)

(b) that depths obtained by echo-soundings be distinguished by a special symbol the meaning of which shall be shown on the chart. On German maritime charts, depths thus obtained are inserted in upright figures while those obtained by lead-soundings are indicated by sloping figures; the chart bears the following legend: -

NOTICE. — Depths shown by sloping figures have been obtained by lead-soundings; the vertical figures indicate those obtained by echo-sounding (echo-distance). Velocity adopted for echo-sounding: 1490 metres. There may be a difference of 3% between the true depth and the echo-distances.

(c) That it is not necessary to determine scientifically the normal velocity of sound mentioned in (a).It is desirable that the value adopted should be standardised. At least, the constant of the velocity of sound which has served as the basis for the plotting of each maritime chart, should be clearly indicated on such chart.

Bulletin Circular N° 1, on page 29 of the Hydrographic Bulletin N° XI - 1928, gives the comments developped by Germany on this subject and an article by Dr. Maurer on the question has been reproduced in the Hydrographic Review Vol. V, N° 1, pages 167 to 172.

*Comments of the Bureau :* [Page 33]

The Directing Committee agrees that it would be very useful to reach an accord on these questions before the number of echo-soundings shown on the charts becomes too large.

The Bureau's comments are detailed in paragraphs 3, 4 and 5 on pages 36 and 37 of the Hydrographic Bulletin N° XI - 1928.

PROPOSALS OF THE BUREAU :

The Directing Committee proposed :

(a) that the soundings obtained by echo be plotted on charts after having been corrected as much as possible.

(b) that no distinction be made from the other soundings or that, should such distinction be made, it should be only by the type of figures with a reference in the title of the chart.

(c) that a standard velocity of sound through sea water be not fixed until new experiments have been made giving this velocity more accurately and tables of correction have been drawn up for calculating it, according to the different conditions of sea water.

and requested the States Members to inform the Bureau whether these proposals are approved, and if not, what other solution would appear to them to be preferable.

*Comments of the States Members :*

The comments of the States Members have already been published in detail in the Hydrographic Bulletin :

*Germany* considers that the Bureau's proposal to correct soundings "as much as possible" is too vague and may give rise to uncertainties (see Bulletin 1928, N° IV, page 86).

Germany has developed the principal object of its proposal in the Note published in the Bulletin of September 1928.

*The Netherlands* prefer the German proposals to those of the Directing Committee with the 3 following changes :

(a) that the proposed legend be put in the list of symbols and abbreviations and not on the charts.

(b) that instead of one mean velocity, one uniform table of mean velocities be used.

(c) that soundings obtained by an ultra sonic transmitter be entered on the chart without any distinction from wire soundings.

*Portugal* approves the resolutions *a* and *c* of the Directing Committee and considers that echo-soundings must be distinguished from other soundings by the form of the figures until the day when they may be considered as having an equal value.

Furthermore, the chart never reproduces observed values but correct-

[Page 34] ed values. The inscription, in percentage of the maximum uncertainty of the echo-soundings, might be added to the title of the chart.

(The Portuguese arguments are expounded on pages 115-117 of the Bulletin N° V - 1928).

*Denmark* and *Spain* approve the proposals of the Directing Committee.

for depths over 200 meters, and that ultra-sonic soundings should be provisionally distinguished by upright figures until more precise tables of correction have been compiled.

*Sweden* thinks that a standard velocity should be adopted especially for depths over 200 metres, and that ultra-sonic soundings should be particularly distinguished from other soundings. The apparatus used should also be indicated in the legend. (See Bulletin 1928, N° IV, pages 118-119).

*Argentine* is of opinion that further investigation is necessary and that whne precise tables of correction have been compiled, it will no longer be necessary to distinguish echo-soundings from other methods of sounding. (See Hydrographic Bulletin 1928 - N° VI, pages 147-148).

The *United States of America* (U.S. Coast and Geodetic Survey and Hydrographic Office) agree in general with the opinions expressed by the Directing Committee.

Their arguments are expounded on pages 148-150 of Bulletin 1928, N° VI.

It would be well to keep track of the velocity which is chosen for regulating soundings.

PROPOSALS BY JAPAN :

Japan submits the following proposals :—

*a*) That depths obtained by echo-sounding should be plotted on charts without any correction. Such depths being the product of observed time interval, required by the transmission of echo, multiplied by a constant sound-velocity, the value of such velocity should be clearly indicated on such charts.

*b*) That to distinguish the depths obtained by echo-sounding from the other soundings a simple method other than the use of different types of figures may be adopted, for instance by underlining the figures, thus 345, with an indication of the use of such method on charts.

*c*) Japan recognises that it is of great necessity that further experiments should be made for determining more accurately the velocity of sound in sea water, but until an international standard velocity is fixed, each country should be free to adopt a certain standard of its own, which should be indicated distinctly on its charts. (Japan would adopt 1500 m/sec. as such standard velocity).

The explanatory notes given by Japan are set forth in the *Hydrographic Bulletin* N° IX of September, 1928. [Page 35]

*References.* — Bulletin N° II - 1928 - Bulletin Circular N° 1, p. 29.
» N° IV - 1928 - Germany, pages 84-86.
» N° IV - 1928 - Netherlands, page 87.
» N° V - 1928 - Portugal, page 115.
» N° V - 1928 - Denmark, page 118.
» N° V - 1928 - Spain, page 118.
» N° V - 1928 - Sweden, page 118.
» N° VI - 1928 - Argentine, pages 147-148.
» N° VI - 1928 - The United States of America, Coast and Geodetic Survey, p. 148-149. — Hydrographic Office, page 150.
» N° IX - 1928 - Japan. p. 247.
» N° IX - 1928 - Germany. p. 249.
» N° XII - 1928 - Germany. p. 312. - I.H.B. p. 316.

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## 23. Collation and publication by the International Hydrographic Bureau of all oceanic soundings. Method of recording echo-soundings. General Bathymetric Chart of the Oceans. (C)

Proposal by Sweden :

Sweden has suggested that the interest of navigators be incited to take echo soundings, to notify these soundings to the Hydrographic Offices, and to cause them to be centralized in a uniform manner by the International Hydrographic Bureau.

If it be possible to carry out this proposal, it must necessarily be taken in hand by the Bureau. The beginning might be made on a comparatively small scale and, after gaining the necessary experience, a final scheme, which is capable of being successively enlarged may be put into operation.

*Comments of Sweden :*

The detailed comments made by Sweden are set forth in Bulletin Circular N° 4, Bulletin N° IV - 1928, pages 81 to 84.

The comments of the States Members have been published in the Bulletin.

[Page 36] *Germany* supports Sweden's proposal and makes the following complementary proposal :

PROPOSAL BY GERMANY :

In view of the importance which should be given to this question, both from the nautico-technical and the scientific point of view, it is proposed that:

" The question of echo soundings, of recording them and the manner of plotting them on charts, be placed on the Agenda of the Conference of 1929,, in order that an interchange of views may render the question clearer and lead to the adoption of a uniform record by all the States Members.

*Comments of Germany : —*

The detailed comments given by Germany are set forth in Bulletin 1928, N° VII, pages 163-164.

PROPOSAL OF THE BUREAU :

The Bureau proposes that the Conference :

1° should decide whether the International Hydrographic Bureau is to be entrusted with the collation of information concerning all soundings taken outside of the continental shelves.

2° should decide upon the type of record to be adopted (see annex hereafter).

3° should decide that the Bureau be charged with the keeping-up-to date of the General Bathymetric Chart of the Oceans, of which the " Cabinet Scientifique du Prince Albert de Monaco " has just drawn up the second edition (see Bulletin 1928, N° III, pages 63 to 67).

*Comment of the Bureau : —*

This proposal is allied with the previous one, for it may be assumed that the great majority of soundings which will be carried out outside of the continental shelves, will be made by means of echo. If the International Hydrographic Bureau is entrusted with the collation of the information relative to echo sounding it can, without any extra work, collate all the soundings taken in the oceanic depths which in other respects are no less interesting. In order to communicate the results of this compilation, the International Hydrographic Bureau will be necessarily led to publish charts and therefore to the keeping up-to-date of a Bathymetric Chart of the Oceans.

The scale and the arrangement will not necessarily be those of the General Bathymetric Chart of the Oceans, such as it exists at present, but the proposal put forward leaves the International Hydrographic Bureau every latitude in this connection.

## *ANNEX I.* Type of Record proposed by Germany.

Ship : Captain : Sailing from : to :

| 1 | 2 | 3 | | | 4 | 5 | | 6 | 7 | 8 | | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° Sounding | Date<br>Hour | Ship's position<br>Latit. | Long. | How determined Uncertainty of place | Course (true) and speed in nautical miles | Method of echo sounding<br>*A.* Depth from the angle and the base ? | *With regard to A.* Size of base ? | Nature of the time measuring apparatus.<br>Apparatus for accurately measuring short intervvals or stopwatch. | *a* Value of echo<br>Data on disturbance (Double echo) | *b* Echo distance<br>Observed echo distance | On what sound velocity is it based ? (*) | Observer | Remarks<br>Wind<br>State of sea |
| | | | | | | *B.* Depth from the time taken by the echo ? | *With regard to B.* Directional or non-directional emission | | | | | | |

(*) In place of the sound velocity, the time taken by the echo may also be given, since from the latter and from the echo distance, the velocity in clearly shown.

## *ANNEX II* (A). Type of Record for Echo Soudings proposed by the International Hydrographic Bureau

Name of Ship :

Name of Captain : Sailing from : to :

Type of Appliances employed { Apparatus N° 1 / Apparatus N° 2

| 1 | 2 | 3 4 5 | | | 6 | 7 (*) | 8 (*) | 9 (**) | 10 (**) | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° Sounding | Year Date and hour | Ship's position<br>Latit. | Long. | By what method — Uncertainty of position (± n. miles) — | True course and ship's speed in knots | Temperature of sea : — at the surface — at the depth of — (specify unit employed) | Density or salinity of sea water : — at the surface — at the depth of | Setting of Apparatus<br>Probable percentage of depth error | Number of the apparatus and error of zero | Control or check sounding | Indication of chronograph time between emission and reception of echo | Indication of scale — Echo distance or half of echo distance — (Specify unit employed) | Velocity of sound used | Reduced sound. | Special remarks (State of sea) |

(*) It is necessary to provide a column for the eventual entry of temperature and salinity of the sea water, so much the more as it may be hoped that within a short time, appliances at present being studied will one day enable ships to collect these data even under way.

(**) The method of depth measuring from the angle and the base seems to be applicable only to rather small depths, so that their collation by the International Hydrographic Bureau is of no interest.

[Page 38]

Annex I. — Type of record proposed by Germany.
Annex II(a). — Type of record proposed by the Bureau.
Annex II(b). — Short type of record proposed by the Bureau.

*References.* — Hydrogr. Bulletin - 1928 - N° III, p. 63.
» » » - N° IV, p. 81, 84, 88.
» » » - N° VII, p. 164, 166.

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*ANNEX II* (B).

## Short type of Echo-Sounding Record.

Sailing from : to :

Name of Ship : Type of apparatus

| Latitude | Longitude | Depth by instrument | Standard velocity assumed forthe apparat. | Remarks |
|---|---|---|---|---|
| | | | | |

NOTE. — All useful information concerning the route followed by the ship and data concerning the physical state of the sea can be inserted in the column of Remarks.

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## 24. Aeronautical Charts. - Coastal charts to be used in air navigation published by Hydrographic Offices. (C)

*Comments of the Bureau :*

Certain national Hydrographic Offices have published, or may eventually publish, coastal charts to be used in air navigation.

It would seem wise and opportune, before these charts have become too numerous, to agree upon the form, aspect and international symbols which are to be used thereon.

With this object, and as there are already some conventions formulated by the International Commission of Aerial Navigation, and used on International Aviation charts (Mercator's Projection) to standardise inland

aviation charts, the International Hydrographic Bureau proposes that the [Page 30] Conference express definite views on the following question : —

Should coastal charts to be used in aerial navigation, published by Hydrographic Offices, be drawn up on the same principle as marine charts, or international aviation charts, or aviation charts drawn up for the coasts of the United States ?

For information, the International Hydrographic Bureau has collected a certain number of particulars concerning symbols, etc., used on Aviation charts of various nations. These particulars, accompanied by notes and a questionnaire, have been published in the form a Synoptic Table (Symbols, Signs Abbreviations and Ground tracks on Aeronautical Charts as adopted internationally, or in actual use).

PROPOSAL OF THE BUREAU :

The Bureau proposes that the Conference express definite views on this question and express a wish which may lead to the standardization of coastal charts to be used in aerial navigation, which may be published by Hydrographic Offices.

The symbols to be used, will result, in general, from the response which is made to the above question. The International Hydrographic Bureau would then be able, if necessary, to enter into collaboration, on this subject, with the International Commission on Aerial Navigation.

*Documents.* — Synoptic table of Aeronautical symbols published by the International Hydrographic Bureau. (Hydrographic Review, Vol. V, N° 2, page 197).

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## 24a. Aeronautical charts. - Coastal charts to be used in air navigation published by Hydrographic Offices. (C)

*Comments of the Bureau : —*

In the Report of the Work carried out by the Bureau it is stated that the Bureau hopes to receive replies to the questionnaire on the subject of the symbols and abbreviations to be employed on coastal charts used in air navigation.

It is stated also that the Bureau will submit to the Conference a draft of a synoptic tabulation of all symbols proposed by International Organisations. or which are actually used on charts for air navigation now in existence issued by the States Members, with the object of ensuring a certain reasonable amount of international uniformity before it is too late. The symbols and abbreviations so far adopted by Hydrographic Conferences for

navigational charts, or those which may be adopted by the present Conference, should be considered as applicable to future aviation charts of coasts.

It cannot be too often repeated, nor sufficiently insisted upon, that the navigator of aircraft flying along the coasts of Europe will not have the time necessary to read explanations of the various symbols given in various languages, even though the navigator may be sufficiently talented to understand all of these explanations, owing to the speed at which he is flying.

Symbolic language antidated spoken and written language and it is believed that the present Conference could not render a greater service to the cause of aviation than to take this question in hand with the least possible delay. If this be done, it would be possible to submit to the International Commission on Air Navigation the adopted symbols, in order thus to reach an agreement which will but require to be ratified to be adopted internationally.

PROPOSAL OF THE BUREAU :

That the Conference should appoint a special Sub-Committee for the purpose of studying the synoptic tabulation drawn up by the Bureau and to formulate recommendations to the Conference on the subject of definite symbols which might be adopted for the purpose of ensuring reasonable international uniformity.

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## 24b. Nautical information concerning canals for inland Navigation. (D)

PROPOSAL OF DELEGATE OF SWEDEN :

In order to assist the seaman in obtaining the necessary information regarding canals, it is proposed to insert in a suitable position on the appropriate charts or in the Sailing Directions a brief note calling attention to the official publications in which such information is to be found.

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# II. SAILING DIRECTIONS - LIST OF LIGHTS AND OTHER NAUTICAL BOOKS.

## 25. Indication of source and date of information relative to Foreign coasts in National Sailing Directions. (B)

[Page 40]

Proposal of 1926 Committee (to be ratified).

The Committee recommends that :

(a) it be clearly mentioned in partly non-original Sailing Directions which publications (with the year of issue) have been used or partly used for the compilation."

(b) for the compilation of non-original or partly non-original Sailing Directions, those issued by the country described or issued by the Government which controls that country, be used."

*Opinion of the Directing Committee :*

Agreed.

*References.* — Report of Proceedings - 1926 - page 443.

## 26. Publication of an index-chart of original Sailing Directions. (B)

Proposal of 1926 Committee (to be ratified).

The Committee recommended " the publication of an index-chart of Original Sailing Directions for use with the index of original charts. "

*Opinion of the Directing Committee :*

A catalogue of Original Sailing-Directions containing an index-chart, could be drawn up on the same principles as those followed for the catalogue of original charts, which is now being executed.

*References.* — Report of Proceedings 1926 - page 443.
Hydrographic Bulletin 1929 - N° II pages 32 to 45.

[Page 41] **27. Bearings to be given from seaward in the Lists of Lights. (B)**

PROPOSAL OF 1926 COMMITTEE (to be ratified).

" The bearings should be true and in degrees from 0° (North) to 360°. measured clockwise and given from seaward ; the bearing limits of sectors and arcs of visibility should also be given from seaward. "

*Opinion of the Directing Committee :*

The London Conference already adopted a similar resolution ; as the Italian Delegation has withdrawn the reservation which it expressed in 1919, there appears to be an almost general agreement regarding this resolution.

(See Abridged Manual of Symbols and Abbreviations. Special Publication N° 22, Plate 12).

*Document.* — Abridged Manual of Symbols and Abbreviations. Special Publication N° 22.

*References.* — Report of Proceedings - London - 1919, page 32.
Report of Proceedings - Monaco - 1926. p. 451.

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**28. Tabular method of compilation of the Lists of Lights. (B)**

PROPOSAL OF 1926 COMMITTEE (to be ratified).

Use of English or French in the Headings of Columns.

The Committee adopted the following resolution ;

" the introduction and headings of columns should be translated into English or French in such lists as are issued in languages other than English or French. "

*Opinion of the Directing Committee :*

Agreed.

*Reference.* — Report of Proceedings 1926 - page 453.

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## 29. Notation for distinguishing the characteristics of Lights. (C) [Page 42]

Proposal of Greece :

Greece proposes :—

*a*) that the diagram representing the whole of the successive phases which the light presents during its period be entitled " Physiognomy of the Characteristics;"

*b*) that a table of all the existing " physiognomies " be compiled, and each type be denoted by a number ;

*c*) that the abbreviations of the lights on the charts, and the characteristics indicated in the Light Lists be replaced by the number in the above table corresponding to the " physiognomy. "

To prevent all confusion, the numbers denoting the " physiognomies " might be represented by Roman numerals or letters.

*Explanatory Note : —*

A table in colours * has been compiled by the Director of Grecian Lights, Captain S. Lycoudis, who first had the idea of inserting it in the preface of the Light Lists and, applying the method, he inserted in the column " Characteristics " the numbers of the physiognomies, in heavy type without any description.

The table contains 51 physiognomies and, in the opinion of Capt. Lycoudis, the physiognomies will not exceed 60, when completed. Owing to the small size of the table, we find that the method is not only applicable but also very practical for the officer of the watch could have it always at hand and recognize the lights at sight without any doubt.

*References.* — See also Hydrographic Bulletin 1928, N° VII - pages 170, 175.
Bulletin 1929 N° I page 13.
Bulletin 1929 N° III page 57.

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## 29a. Notation for distinguishing the characteristics of lights on coastal aviation charts. (C)

*Comments of the Bureau : —*

The International Commission on Air Navigation has proposed certain symbols for Lighthouses for use on aviation charts; as it is proposed

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* Not reproduced here.

to this Conference to take up the question of the adoption of certain signs, symbols and abbreviations for use on coastal aviation charts, it might be well to adopt one or two letters as abbreviations for the more important characteristics of lights which are most frequently met with. These, combined with numbers, would assist navigators of aircraft to identify Landing Lights and other Lights.

The most important abbreviations are those which indicate : —

flashing lights, single or group ;
fixed lights ;
occulting lights ;
colours of lights and sectors ;
and a few simple combinations of these characters.

PROPOSAL OF THE BUREAU :

That the Sub-Committee, the appointment of which has been proposed for the purpose of examining " Proposal N° 24a — Aeronautical Charts ", should also consider the adoption for coastal aviation charts of a certain limited number of abbreviations of characteristics of lights to serve as a basis for future agreements.

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[Page 43]

## 30. Information concerning lists of Signal stations for insertion in the Light Lists. (B) (C)

PROPOSAL OF 1926 COMMITTEE :—

The Committee adopts the proposal " that there should be included in the List of Lights, for those stations only which are associated with the lights, the following lists " :

1. Lists of Lights ;
2. List of International Signal Stations ;
3. Lists of W.T. and D.F. Stations ;
4. List of the Signal Stations regarding ice and Light Vessels ;
5. List of Submarine Signal Stations.

*Comments of the Bureau : —*

It would seem that the above proposal, made by Sweden at the 1926 Conference, aimed simply at indicating in the Light Lists, either in the column of remarks, or in the final index, those lights with which are associated one or several of the above stations.

This proposal should be compared with the following resolution adopted in 1919 at London.

Section III. — M. — Insertion of information other than that directly relating to lights, such as storm signals, tide signals, port signals, life-saving stations, submarine bells, sound-signals by W/T, direction-finding by W/T, sound ranging signals, etc.

That the List of Lights should include all such aids as will enable the navigator to determine direction and distance. If any light station is equipped to furnish additional information useful to the Mariner, this should be included in a remarks column.

The Directing Committee considers that it is an added expense and that the List of Lights should not be encumbered with these lists, but that they should be included in the International Code Book of Signals as an appendix.

In any case, such lists would be misleading, if only those stations connected with Lights, were inscribed, as stations at other geographical points are of equal importance.

Proposal of the Bureau : —

In the interest of uniformity of methods, and to save unnecessary expense, it is preferable to free Light Lists from undesirable complications and only insert information which is absolutely necessary.

*References.* — Reports of Proceedings - London 1919 - page 35 - Section III-M.

Report of Proceedings - Monaco - page 469.

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## 31. International Code Book of Signals. (C)

[Page 44]

Proposal of the Bureau :

The Bureau proposes that the Conference request the Committee of the Board of Trade to publish, in the International Code of Signals, separate lists, with their geographical positions, of all Life Saving Stations and their equipment; all Visual Time Signal Stations; Semaphores; Coastal Signal Stations using international code by semaphore, flag or flash-light signals ; all Visual Storm Warning, Weather and Ice Signal Stations.

The Bureau proposes further, that these lists should not be incorporated in the List of Geographical Positions of the International Code as in the edition of 1922 : the position of some of these Stations have no relation to that of the Geographical position given.

Also as a Committee of the Board of Trade is charged with revising and modernizing the International Code of Signals, the Bureau proposes that the Conference express a wish, which will be transmitted to this Committee, that the various messages, warnings, signals and other inform-

ation connected therewith, which are addressed to Mariners, may be internationally standardised and entered in the Code, in such a way that they may be easily found therein.

*Comments of the Bureau : —*

The International Hydrographic Bureau could furnish all necessary information on this subject.

*References.* — See Proposal 1926 - pages 47-48.
Work done by the International Hydrographic Bureau 1926 - pages 149-150, and Supplement N° 38.

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## 31a. International Code Book of Signals. (C)

*Modification of the Proposal of the Bureau :*

According to information recently received by the Bureau, the Board of Trade Committee, which is now undertaking the revision of the International Code in London, intends to limit its work entirely to signals properly so-called and is of the opinion that the new edition should not contain the various lists mentioned in Proposal N° 31.

Consequently the first two paragraphs in Proposal 31 are no longer valid and the Bureau proposes to publish these lists separately from time to time

The various Hydrographic Offices of the States Members should cooperate in keeping these lists up to date by publishing Notices to Mariners periodically or annually, or at least by periodically advising the Bureau of the necessary changes.

Publications of this type would collate various information which is useful to navigators in the form of handbooks which are easy to consult ; they would be suitable complements to the books required on the bridge. Their form would facilitate research.

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# III. NOTICES TO MARINERS.

## 32. Translation into English or French of the first Notice to Mariners of each year issued in a language other than English or French. (B) (C)

[Page 45]

PROPOSAL OF 1926 COMMITTEE :—

The Committee was of opinion that :

" the first number of Notices to Mariners of each year should be translated into English or French and be printed in Roman characters. "

*Comments of the Bureau : —*

As the first number of Notices to Mariners of each year includes general information on the publications of the Hydrographic Offices and on the manner of keeping them up to date it would be of advantage if this information be also made known to foreigners who have to consult nautical documents.

The above proposal is intended to fulfil the purpose.

The Directing Committee considers, further, that it would be an advantage if all information of a general order, issued by Notices to Mariners in the form of General Notices, were similarly translated in order to disseminate it more extensively.

PROPOSAL OF THE BUREAU :

Notices to Mariners called " General Notices ", containing general information which it is advisable to disseminate and to make known to foreigners, should be translated into English or French and printed in Roman characters.

*Reference.* — Report of Proceedings 1926 - page 460.

## 33. Period of previous notice to be given before the installation or alteration of aids to navigation. (B)

[Page 46]

PROPOSAL OF 1926 COMMITTEE (to be ratified).

The Committee considered that " two months " previous notice should be given whenever practicable, of the installation of new aids to navigation or of alterations in those which exist. "

*Opinion of the Bureau :*

Agreed.

*Reference.* — Report of Proceedings 1926 - page 455.

## 33a. Notices to Mariners. - Summer time. (C)

PROPOSAL OF THE BUREAU :

The Directing Committee recommends that the Hydrographic Office of every nation should publish annually, as early as possible, a Notice to Mariners giving the dates of the commencement of summer time for its own country, its colonies, protectorates and dependencies and for such other countries of which it has been informed of the dates.

As far as possible Notices of this type should be grouped together and appear at the beginning of one of the periodical issues of Notices to Mariners.

*Comments of the Bureau :* —

These changes of time are of particular interest to navigators because the various elements necessary for navigation and the information which is given to them by annual tables and nautical documents are generally based on the same time throughout the year.

A certain number of Hydrographic Offices already publish such Notices to Mariners; it would be of advantage if all maritime States which publish Notices, should do so also, as this would contribute each year towards greater accuracy of the information given in the article " Summer Time " which will be found on page 18 of the Year Book for 1929.

*Reference :* Hydrographic Bulletin N° 1 of 1929, page 10.

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## 34. Mention, in Notices to Mariners, of the intention to issue further Notice on any subject. (B)

PROPOSAL OF 1926 COMMITTEE (to be ratified).

The Committee considered that :

" if it is intended to issue a further Notice on any subject, the fact should be mentioned in the first or preliminary Notice. "

*Opinion of the Bureau :*

Agreed.

*Reference.* — Report of Proceedings - 1926 - page 455.

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## 35. Notices of a temporary nature. (B)

PROPOSAL OF 1926 COMMITTEE (to be ratified).

The Committee expressed the following wish :

(a) " that Notices of a temporary nature should be so marked by each country;
(b) " that each country should issue a monthly list of temporary Notices still in force."

*Opinion of the Bureau :*

Agreed.

*Reference.* — Report of Proceedings - 1926 - page 455.

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## 36. Dissemination of Notices abroad and centralisation of Notices in the principal ports. (B) (C)

[Page 47]

PROPOSAL OF 1926 COMMITTEE :—

1°) The Committee has expressed the following wish :
" that each country should send all its Notices to some centre in the principal foreign ports and that these Notices should be at the disposal of captains of vessels who wish to consult them."

2°) The Committee considered the following question to be outside its province:
" to make this consultation compulsory and in the meantime to invite the Representatives of the States Members to bring the question before their National Marine Boards, and to impress these authorities with the importance of these consultations."

*Comments of the Bureau.*

These comments are developed in Circular-Letter N° 42-H of 1927 which proposes a provisional list of ports of centralization and has sought the means of effecting this centralization.

*Comments of the States Members.*

The comments of the Members have been published in the Hydrographic Bulletins 1928 - N° II, p. 50; N° III, p. 57; N° V, p. 119; N° VI, p. 145; N° VII, p. 177; N° VIII, p. 232; N° IX, p. 245; N° X, p. 265; N° XII, p. 304 - 1929 - N° I, p. 11; N° III, p. 67.

Among the replies received :

*Australia, Argentine,* and *Great Britain* do not consider that the advocated system would add much to the efficiency of the present system. (See Bulletin N° III, page 61).

*Japan,* and *the United States of America* are adherents of the system of centralization and have issued instructions ot their Consular Representatives.

*Germany, the Netherlands* and *Portugal* are adherents of the system of centralization, but request that it should be effected through the Hydrographers and not through the Consular Representatives.

*Denmark, Egypt, Norway, Sweden* and *Poland* have already effected the system of centralization and given addresses of centralizing Offices in their Ports.

[Page 48] *Opinion of the Bureau :*

The Bureau proposes that the Conference should approve of the principle of centralization of Notices in certain ports on the following bases :

PROPOSALS OF THE BUREAU :

1° The Hydrographic Offices shall make known to the International Hydrographic Bureau the ports of their country and colonies for which they desire the service of centralization of the Notices issued by other nations and the addresses to which these Notices should be sent.

2° The International Hydrographic Bureau will publish the list of these ports and of these addresses.

3° The Hydrographic Offices shall then inform the International Hydrographic Bureau of those ports to which they agree to send their Notices (free of charge if possible).

4° The International Hydrographic Bureau will publish the revised list of ports and addresses and of the Notices which are sent there.

5° The Hydrographic Offices shall inform mariners by means of their Notices to Mariners the ports and addresses where this centralization is in operation.

*References.* — Circular-Letter N° 42-H of 1927.
Hydrographic Bulletin 1928, N° II, III, V, VI, VII, VIII, IX, X, XII - 1929 - N°s I, III.
Report of Proceedings 1926, page 457.

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## 36a. Centralisation of Notices to Mariners in the principal ports. (C)

This centralisation Service for Notices to Mariners is now in operation in a certain number of ports. It would be of advantage if navigators were informed periodically thereof and of what Notices will be found in the Centralising Offices. For this purpose, the Directing Committee makes the following proposal.

PROPOSAL OF THE BUREAU :

The Hydrographic Offices should indicate periodically (annually for example) by means of Notices to Mariners, the ports with centralising

services to which they send their Notices to Mariners and at which Captains of vessels can consult them.

It will be of advantage if this list be inserted in the Sailing Directions.

*Reference :* Hydrographic Bulletin N° 1 of 1929, page 11.

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## 36b. Mention of original charts in Notices to Mariners. (C)

PROPOSAL OF THE BUREAU :

1° In order that navigators who wish to use original charts may be able to correct them by means of Notices to Mariners published in a language with which they are familiar, the Bureau proposes that the Hydrographic Offices should, where necessary, mention in their Notices, the numbers of such original charts which appear in the Catalogue published by the International Hydrographic Bureau and which are affected by the Notice.

2° When an *original Notice to Mariners* is reproduced, and the geographical position given therein is modified (in consequence of a difference in the origin of longitudes or minor differences in the graduation) the coordinates given in the original Notice and the numbers of the original charts affected should be reproduced also.

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## 37. Limits of Oceans and Seas. (B) (C)

(*See* Report of Proceedings 1926, pages 422, 454, 460).

The 1926 Committee referred this matter to the Bureau with a view to obtaining a solution of the question.

The International Hydrographic Bureau has studied this question, and has tried to take into account all the desiderata expressed by the London Conference, and by the various interested countries.

The results of this study are issued in Special Publication 23.

PROPOSAL OF THE BUREAU :

The Bureau proposes that the Conference adopt the limits described in the above document, for the geographic repartition of Notices to Mariners. in agreement with that of the Sailing Directions and Light Lists.

*References.* — Report of Proceedings London 1919 - page 36-B.
» » Monaco 1926 - p. 422, 454.
Special Publication N° 23.

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# IV. QUESTIONS COMMON TO HYDROGRAPHIC PUBLICATIONS IN GENERAL.

[Page 40]

## 38. Use of English or French in publications other than those in English or French. (B)

PROPOSAL OF 1926 COMMITTEE (to be ratified).

The Committee considered that :

" the catalogues of Charts which are published in languages other than English or French should be translated into English or French in order that they may be read and understood by mariners of any nationality. The introduction, preface, headings of columns, etc., at least should be translated into English or French, as is the case, for example, in the Swedish catalogue of charts. "

" The Committee thought it desirable that an English or French summary be given of any publication issued by a Hydrographic Office to draw attention thereto. "

" The Committee decided that any interesting publication concerning Hydrography might be published in French and in English by the International Hydrographic Bureau, permission to reproduce having first been obtained from the authors. "

*Opinion of the Bureau :*

Agreed.

*Reference.* — Report of Proceedings 1926 - page 439.

## 39. Copyright of Hydrographic Publications. (B)

PROPOSAL OF 1926 COMMITTEE (to be ratified).

The Committee expressed the wish that the resolution of the London Conference, mentioned below, should be more strictly applied in future.

" It is desirable that every Hydrographic Office should be free to reproduce, except in facsimile, all publications of other Hydrographic Offices, provided that such reproduction should have printed on it a due acknowledgment of the original source from which it is derived. " [Page 50]

*Opinion of the Bureau :*

Agreed.

*Reference.* — Report of Proceedings 1926, page 433.

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## 40. Overlapping of Hydrographic Publications. (A)

This proposal submitted by the Bureau in 1926 was not examined by the 1926 Committee.

Proposal of the Bureau :

The Bureau proposes that :

" where it is necessary to overlap or duplicate matter in hydrographic publications, the evidence of such overlapping with another publication of the same kind shall be so clearly indicated that not one overlap can escape notice when making corrections. "

*Comments of the Bureau :*

The overlapping of subject matter in hydrographic publication cannot be avoided. It is not only an added expense, but the great drawback is that it becomes dangerous when overlooked in making corrections, such as, from Notices to Mariners.

Overlapping should be reduced to a minimum, and might best be indicated by printing all overlapping parts with type of a special character, by encircling the numbers of the pages in a special way, or by colouring the edges of the pages with a bright colour, such differences being explained in the preface of the volume.

A) *Charts.*

Should the Conference accept the proposal made by the Chart Committee, viz., to show at an appropriate place on the charts the numbers of adjoining charts (See Chart II, above) the indication of overlapping of at least one chart on a scale which is not very different cannot be overlooked.

B) *Sailing Directions.*

Each part of the subject matter in any volume which is repeated in another should be preceded by a mention of the fact and of the extent of the overlapping.

[Page 51]

c) *List of Lights, Tide Tables, etc...*

The List of Lights ordinarily requires very little overlapping, but where it is necessary special type should be used to indicate the lights mentioned in more than one volume.

Tide Tables, Lists of Signals by W/T. and similar publications contain, as a rule, the required information for the whole world and no overlapping is necessary.

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## 41. Non-Official Publications. (A)

The proposal made by the Bureau in 1926 was not examined by the 1926 Committee.

PROPOSAL OF THE BUREAU :

The Bureau proposes that :

*a*) Hydrographic Offices should warn seamen against non-official publications for navigational purposes and endeavour to bring about the use of official publications, as these only are corrected up to the date of their sale and while they are in use by means of Lists of corrections.

*b*) Hydrographic Offices should further endeavour to bring before their National Marine Board the question of taking action within their jurisdiction against captains of ships who get into difficulty through using unauthorized publications for navigating.

*c*) an international agreement should be made for the suppression of the sale of such unofficial publications.

*Comments of the Bureau : —*

The latest edition of every official navigational publication of each country contains at the moment of its sale the best information that can be given, and usually gives the date up to which it is corrected. It should therefore be used by every seaman in the interests of safety of navigation. If it is further kept corrected up-to-date with the aid of Notices to Mariners, the document contains continually the best information that can be procured, whereas the seaman who uses unofficial publications, issued by some private firm which does not keep its publications corrected up-to-date of sale, deliberately takes risks.

The difference in price between official and unofficial publications is not sufficient to justify taking chances, and, as information given in a smaller compass seems to be one of the attractions of these unofficial publications, it is suggested that the Hydrographic Offices of those countries in

which these unofficial publications are sold should endeavour to cater to the local demand as to scale of chart, extent of information, low prices and numerous places of sale. [Page 52]

If every national Board would hold seamen responsible for accidents due to using such unofficial information, the sale of the latter would automatically cease. Were a number of countries to take such action, it might lead to international agreement requiring the use of official publications in navigation.

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## 42. Dissemination of nautical information. (A)

The proposal made by the Bureau in 1926 was not examined by the 1926 Committee

Proposal of the Bureau :

The Bureau proposes that :

" each Hydrographic Office should seek to obtain prompt information as to changes in aids to navigation from not only those branches of the Government which are charged with their maintenance, but also from pilots, sea captains and others who should be encouraged in every way to report immediately any divergencies which they have observed between aids to navigation and the indication given on charts or description in other official publications.

*Comments of the Bureau :*

All information for safe navigation should be available for seamen through the publications of the Hydrographic Office, and it is only by the co-operation of all interests that Notices to Mariners can keep such publication continually up-to-date. It is essential that it should be clearly recognised in all countries that the Hydrographic Office is the responsible agent for the transmission of information which shall make navigation safer and easier in all the seas of the world. Any such corrections for Notices to Mariners should be sent either to the national Hydrographic Office or to the Hydrographic Office concerned.

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# V. MISCELLANEOUS.

[Page 53]

## 43. Unification of the International Notations for Latitudes, Longitudes, etc... (C)

*Comments of the Bureau :*

This question was examined in an article entitled " Correspondence on the subject of Notations " published in the Hydrographic Review, Vol. V, N° 1, page 233.

A list of notations has been adopted by the International Astronomical Union, but no understanding has been reached with the Geodetic and Geophysic International Union, which is likewise interested in this question.

The Bureau considers it desirable to study notations on which International agreement has been reached.

PROPOSAL OF THE BUREAU :

The Bureau proposes, then, that the Conference discuss, if occasion arises, the question of requesting the International Geodetic and Geophysic Union to include this matter on the order of the day of its General Assembly at Stockholm in 1930. The adoption of the notations might the confined, in the first place, to the following, which have already been accepted by the International Astronomical Union and which are of particular interest to mariners and geodesists, and on which agreement might be reached, perhaps, without much difficulty, for example :

- $\varphi$ Geographical Latitude, North +, South —.
- $\varphi'$ Geocentric Latitude.
- L Terrestrial Longitude reckoned from 0° to 180° or from $0^h$ to $12^h$ from the international meridian, + towards the west and — towards the east.
- a Half major axis of the Terrestrial Ellipse.
- b Half minor axis of the Terrestrial Ellipse.
- $\alpha$ Ellipticity of the Terrestrial Ellipse.

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For other notations, fairly numerous, which might be useful for navigation, in particular those to denote and reckon azimuths, the differences between the usages of astronomers, geodesists and mariners are perhaps greater and more difficult to overcome ; the unification of this point will be reserved to a later period.

*Reference.* — Hydrographic Review Vol. V, N° 1, pages 235, 237.

## 44. Use of the International Ellipsoid. (C)

PROPOSAL OF THE BUREAU :

" The Bureau proposes that the Conference express a wish in favour of the use of the International Ellipsoid for Hydrographic purposes whenever the obligation of using earlier works is not an obstacle to this use. "

*Comments of the Bureau :*

An article concerning the use of the Ellipsoid by various countries and at different periods for the construction of charts, was published in the Hydrographic Review.

The Bureau has published Tables of Meridional Parts for the International Ellipsoid, by which means Mercators projection is facilitated.

*References.* — Tables of Meridional Parts - Special Publtn. N° 21.
Hydrographic Review Vol. IV, N° 2 - p. 135.
» » Vol. IV, N° 1 - p. 226.
» » Vol. IV, N° 1 - p. 203.

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## 45. Adoption of a uniform length for the sea-mile. (C)

PROPOSAL OF THE BUREAU :

The Directing Committee proposes to the Conference that :

" the length represented by 1852 times that of the international prototype of the metre shall be called the *international nautical mile*".

*Comments of the Bureau :*

A note has appeared on this subject in the Hydrographic Review.

This article — paragraph 3 (page 236) — explains the reasons which [Page 55] would justify this unification and gives values or definitions, adopted by different countries, for the sea-mile.

The Sea-mile is a unit commonly used for measuring distances at sea, therefore its value should not vary with the latitude of the different countries.

The inconvenience from this variation, and from the resulting uncertainty, is slight for expressing distances when great accuracy is of little importance; it is not quite the same thing, however, when the Mile is used to indicate the speed of vessels, the very accurate expression of which is often of some consequence, as for example, for obtaining premiums.

Moreover, it would be advantageous if the length of the mile, which is shown on the scale of charts, were uniform, and were it unnecessary to inscribe it, each time, at the side of the scale.

The proposed value is that which approximates most closely to the figures generally adopted.

*Reference.* — Hydrographic Review, Vol. V - N° 1, pages 227, 232.
See Resolution N° 11 (London 1913). One Millionth Map of the World.
Hydrographic Bulletin 1928 N° X - Japan.

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## 46. Geographical Terms used on charts and in Sailing Directions. (C)

PROPOSAL OF GREECE.

Greece proposes that the International Hydrographic Bureau should undertake the collection of geographical terms, in general use on charts and in Sailing Directions, and select from among these terms, those which appear most appropriate, and draw up an alphabetical list with the translation in French and English.

*Explanatory Note.*

The list would help the mariner to recognise the coasts, and would assist Hydrographic Offices in finding the correct word for preparing their documents for publication.

These terms are those which denote on charts and in Sailing Directions, straits, coasts, their promontories and indentations, shoals, and in general all the geographical anomalies which are of interest to Hydrography.

*Reference.* — See Special Publication N° 22 I.H.B., pages 6 to 12.
See Hydrographic Review - November 1928 - Terminology of Submarine Relief, page 22 (table).

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## 47. Standardisation of luminous Time-Signals. (C)

PROPOSAL OF GERMANY :

Germany proposed that the Bureau should make representations to the States Members with the object of standardising the characteristics of luminous Time-Signals which are now being installed in ports to replace the old time ball signals, etc...

*Explanatory Note :*

The arguments of Germany are set forth in Bulletin N° XI, 1928, pages 38 and following.

The Bureau requested the opinion of other States. They have been published in Bulletin 1928, N° IV, p. 98 ( Portugal ) ; N° V, page 121 (Netherlands, Denmark); page 122 (Sweden).

PROPOSAL OF THE BUREAU :

The Bureau proposes that an international type of luminous time signal be adopted.

This signal should be very simple : Five minutes before the exact hour the lamps are lit and remain alight up to the exact hour. The instant of the extinction constitutes the time signal itself, which ought to coincide with a *complete* hour of Greenwich.

In consequence the warning signal is given at the 55th minute by the lighting of the lamps. The signal ought to be made at least three times per diem, one of the signals being made at noon of the zone time adopted by the country.

The signals will be made automatically by means of a controlling clock.

*References.* — *See* Hydrographic Bulletin 1928 - N° II - p. 38, N° IV - p. 98, N° V - p. 121, N° IX - p. 254, N° XI - p. 295.

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## 48. Safety Lanes and Danger zones. (B)

PROPOSAL OF 1926 COMMITTEE :

The Committee proposed :

" to urge some international organisation, which may not as yet be formed, to take up the study of the delimitation of lanes of traffic and danger zones in much frequented waters. "

*Comments of the Bureau :* [Page 57]

This subject was brought before the Second International Hydrographic Conference by the Bureau and a recommendation was made by the Committee on Charts and Technical Documents that the question be referred to an International Organisation. The Directing Committee is of opinion that this question is more likely to be considered favourably if the International Organisation has before it suggestions emanating from various maritime countries. The Delegates were invited, by circular letter N°s 2-R, 4-H 1928, to make written proposals as to definite zones in connection with

this subject for submission to the Conference before it is referred to the International Organisation.

The Bureau has received no comment on this subject.

*References.* — Report of the Proceedings - 1926 - page 431.
Circular-letter 2-R, 4-H 1928.
Hydrographic Bulletin 1928 N° X, p. 270, Argentine.
See also Supplementary Report on Work of the Bureau, N° 30.

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## 48a. Study of Oceanic Currents. (C)

*Comments of the Bureau : —*

At the Second International Conference, 1926, the Peruvian Delegate expressed the desire that the Bureau should undertake the study of the Humboldt Current, with a view to perdiction of the harmful changes with which it is affected ; the Conference adopted a Resolution to the effect that

> "such study should be left to the various Hydrographic Offices which now undertake such research, it being considered that a research of this sort by the Bureau would be beyond the capacity of its personnel."

The International Committee for the Exploration of the Sea, of Copenhagen, and the various Committees of the Oceanographic Section of the International Geodetic and Geophysic Union may very well be considered as able to undertake this work in the future, but for the moment it seems to enter rather into the sphere of the Commission which has recently been constituted at Madrid.

PROPOSAL OF THE BUREAU :

That the Conference suggest to the Consejo Oceanografico Ibero-Americano which has recently been created, the advantages which would arise from the study of the Humboldt Current, seeing that this current affects the area which depends on this organisation.

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# VI. STATUTES.

## 49. Conditions to be fulfilled for admission as a Member of the International Hydrographic Bureau (Art. 5 b). (C)

[Page 58]

*Comments of the Bureau :*

Articles 3 *a*, *b* and *c* of the Statutes provide for the payment of a share in the assets of the Bureau, by every new State Member, in proportion to its number of votes.

These articles, which have not yet been enforced, would oblige a new State Member, at the present time, to pay, the year it joined, a total sum almost double the amount of its normal annual subscription. This might prevent new States from joining the Bureau, or it might create difficulties between the Hydrographic Offices of these States and their Governments on account of the payment of a sum of exceptional character.

Moreover, Article 5 (b), in stating that a State which has withdrawn, cannot again become a Member of the Bureau, until its financial obligations have been settled, does not specify if these financial obligations are limited to the payment of contributions due before the withdrawal, or if they include, also, a proportional part of the assets of the Bureau, or to its increased assets since the withdrawal of the Member.

The rights of States Members to the assets of the Bureau appear, however, to be able to be safeguarded, by specifying in Article 63 (v) that, in case of the Suppression of the Bureau, the balance of the assets of the Bureau shall be divided in proportion to the amounts contributed by each Member, since it joined the Bureau.

PROPOSALS OF THE BUREAU :

The Bureau proposes then :

1° To replace Article (3) by the following :

3 (a) Any other State, Member of the League of Nations, if it so desires, shall be admitted as a Member of the Bureau.

(b) The admission of States which are not Members of the League of Nations, will be decided by the vote of the Members of the Bureau, and not less than two-thirds of the number of these must give their consent to such admission.

2° to replace Article 63 (v) by : [Page 59]

63 (V) The credit or debit balance of the Bureau shall be divided amongst the actual Members at the moment when the suppression is decided upon, in proportion to the amount contributed by each of them since it joined the Bureau.

*References.* — Statutes 1926, Art. 3, 5, 63.

## 50. Keeping-up-to-date the Table of Tonnages (Art. 34) (C)

PROPOSAL OF THE BUREAU :

ART. 34 (b). — *Appendix D to be kept up to date by the Directing Committee.*

Strictly interpreted this would entail alterations to the Table whenever a ship is launched or purchased abroad or an old ship is " scrapped ", sold abroad or lost. This is both unnecessary and undesirable, for it would entail changes in the amounts of contributions at frequent intervals and would sometimes cause inconvenience in the drawing up of the Budgets of the States. It would seem better that such changes should not be made more frequently than at the end of each five year period, and therefore the Directing Committee suggests that the Article be modified to read : —

> " Art. 34 (b). — The tonnages taken for the purpose of determining the contributions of the States Members are given in Appendix D which shall be brought up to date by the Directing Committee before each periodical Conference by the following procedure: — The invitation prescribed by Art. 56 (a) shall contain a request for the revised tonnage for each Member, which figure should be sent to the Bureau with the list of subjects and questions to be discussed. The Directing Committee will add a statement of the new figures for Appendix D. to the schedule which is to be despatched to the Members six months before the proposed date of meeting of the Conference.
>
> Should a State desire to adhere to the Bureau, it shall declare the amount of tonnage (Naval and Mercantile) which flies its flag. The Directing Committee will announce this figure to the Members, and enter it in Appendix D. as soon as the adhesion becomes definite. "

The Directing Committee considers that it is undesirable to submit such tonnage figures to the Conference or to the Members *for approval* as the figures supplied by the Governments cannot be questioned.

*References.* — Statutes 1926 - Art. 34.
Circular-letter 2-R, 4-H 1928.

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## 50a. Contribution of the Principality of Monaco. (Art. 35b.) (D)

PROPOSAL MADE BY THE DELEGATES OF FRANCE, ITALY, PERU, PORTUGAL, AND UNITED STATES OF AMERICA.

The Delegates of the States Members, being desirous of giving expression to the gratitude of the Members of the International Hydrographic Bureau to the Principality of Monaco for the offices which it is placing freely at the disposal of the Bureau, propose that this participation in the operation of the Bureau on the part of the Principality be considered as taking the place of the annual contribution which it has made until now.

## 51. Votes of States which are not Members of the Bureau. Art. 57 (b). (C)

[Page 60]

*Comments of the Bureau :*

The Directing Committee considers that, if such States have the right to vote on questions of a technical character, they have nearly all the rights of a Member. In fact by exercising this right and by purchasing the Bureau's publications nearly all inducement to become a Member vanishes, for the cost of so doing would be greater and such States can rest assured that, in their own interests, the Members will see to it that the administration and organisation of the Bureau are as satisfactory as they can be made.

PROPOSAL OF THE BUREAU :

The Directing Committee suggests, therefore, that par. (b) of Art. 47 be modified in the sense that : —

> Art. 57. (b). — "A State which is not a Member, and is represented at a Conference, shall not have the right to vote on any question, the Delegation being invited to take part in the Conference in a consultative capacity and as an observer only."

*References.* — Statutes - 1926 - Art. 57 (b).
Circular-letter 2-R, 4-H 1928.

# VII. ADMINISTRATION.

[Page 61]

## 52. Revision of the free distribution Lists of publications of the International Hydrographic Bureau. (C)

*Comments of the Bureau :*

The methodical examination of the free distribution lists of the publications of the International Hydrographic Bureau, has enabled the Directing Committee to ascertain that the number of free distributions requested by the States Members varies a great deal with each State. It therefore seems advisable to re-examine these lists, in order that the free distribution of the Bureau's publications be made only to Offices or Institutions, the objects of which are of a maritime character connected with the activities of the Hydrographic Offices and the International Hydrographic Bureau.

For this purpose the Directing Committee makes the following proposals :

PROPOSALS OF THE BUREAU :

The free delivery of the Bureau's publications, effected at the request of the States Members, shall be limited in the following manner :

1° *Delivery to Hydrographic Offices :*

1 copy for the official Government Representative in connection with the Bureau.

1 copy for each Section or Division shown in the year-book with a maximum limit of 10 copies.

2° *Delivery to Hydrographic Parties :*

1 copy for each organized party including more than two officers and the existence of which shall have been notified to the Hydrographic Bureau when indicating the Work projected for the current year.

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3° *Free delivery only to Offices, Organisations or National Institutions of a maritime character* notified by the Hydrographic Offices. Maximum number 10 for each State Member.

The Directing Committee is of opinion that the names of private persons should not be placed on the permanent free distribution lists.

*References.* — Circular-Letter 5-H, 1928.
Report of Proceedings 1926 - p. 327.

## 52a. Exchange of the International Hydrographic Bureau's Publications for those of the Consejo Oceanografico Ibero-Americano. (D)

PROPOSAL MADE BY THE PERUVIAN DELEGATION.

In the name of the Directing Committee of the Consejo Oceanografico Ibero-Americano, Alcala 31, Madrid, of which Professor Odon de Buen is the President, taking into account the advantages which may result from an interchange of publications between this institution and the International Hydrographic Bureau, I propose that the latter should send to the Council those which have already been published as a contribution from the Bureau to its library. The Council will also send all its publications to the International Hydrographic Bureau.

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## 53. Formation of a Retirement Fund for the Staff of the International Hydrographic Bureau. (C)

*Comments of the Bureau :*

The Directing Committee, in accordance with the wish expressed by the Second International Hydrographic Conference, availed itself of the advice and assistance of the Financial Organisation of the League of Nations and enquired therefrom as to the advantages to the Bureau of such a scheme. It appears that the principal benefits to the Bureau are : —

*a*) Suitable members of the Staff are encouraged to remain in the service of the Bureau by the existence of such scheme.

*b*) It is possible to superannuate members of the staff without fear of leaving them destitute in their old age ; such fear tends towards the retention on the Staff of old members who may have done excellent work in the past but are no longer capable of so doing.

With reference to *a*, it is obvious that the existence of a Fund and the prospect of a pension will have the effect suggested. As to *b*, though such cases are not likely to have to be envisaged for some years, yet the operation of *a* tends to produce them. Obviously, the sooner such scheme is put into action the more valuable will be the sums available.

PROPOSAL OF THE BUREAU :

The Directing Committee proposes the adoption of the following scheme of a Retirement Fund :

## RETIREMENT FUND.

*a*) There shall be established as from..... a *Retirement Fund.* Each non-elected member of the Staff of the *International Hydrographic Bureau,* subject to the provisions of paragraph *c*) 1., shall receive, on the day of cessation of his service, the balance standing against his name in the fund, provided that such cessation is approved by the Directing Committee and is not due to summary dismissal. In case of death this balance shall be paid to his family or to his dependants at the discretion of the Directing Committee.

*b*) The fund will be constituted by setting aside a sum equal to 10% of each employee's salary per annum during the first ten years of his service and to 2% of his salary for the remainder of his service.

The Bureau will contribute all of this 10% to the fund, which belongs to the Bureau and shall be administered by the Secretary-General in accordance with instructions issued by the Directing Committee.

*c*) 1. Employees who leave with less than 2 years service will receive no payment from this fund.

2. An employee who leaves the Bureau after completing 2 years service and before he has 10 years service will receive the sum with which he is credited in the fund, with no interest.

3. On completion of 10 years service the Bureau will contribute 2% of the employee's total annual salary, but interest will commence to be credited to the employee's account, and an employee who leaves thereafter will receive the sum standing to the credit of his account in the fund, on the date of termination of his employment.

4. Should an employee be granted an increase of salary after he has completed 10 years of service, the amount standing to his credit in the fund, on which interest is drawn, will be augmented at the same time by a sum equal to the increase of salary granted and interest on this augmented sum will be credited to his account in the fund, as mentioned in 3.

5. In calculating the interest due, periods of service of less than half a year will be neglected.

*d*) There will be no separate investment of the fund ; it will be dealt with in the same way as the Bureau's reserve.

*e*) When an employee has completed 10 years of service, the sum with which he is credited will be brought up to the amount of his annual salary at that time and will then draw interest, as mentioned in *c*) 3.

*f*) The contributions for an employee who, on leaving the Bureau, has received a payment from this fund on account of retirement and who is reengaged : —

1. will, if his previous service is less than 10 years, be recommenced as if he had not left the Bureau but, on completion of 10 years total service in the Bureau, that part only of the fund which has been contributed on his account since his reengagement will draw interest.
2. will, if he had served 10 years before leaving the Bureau, be continued at the rate of 2% of his total annual salary, augmentations of salary being taken into account as provided for in paragraph *c*) 4.

*g*) On the establishment of this fund the sums placed to the credit of the existing personnel under Art. 10 paragraph *c*) clause iii of the existing Regulations for the Office Staff (January, 1928) will be increased by the amounts necessary to bring them up to such total as they would have attained, had the Bureau set aside 10% of the annual salaries paid to each employee since he joined the Bureau.

*h*) The sums credited to employees who leave before completing two years of service will be entered into a special fund, entitled " Death and Invalidity Fund ", which will be employed to furnish special grants in cases of death or retirement through invalidity of employees, should the Directing Committee consider that any such cases are worthy of special consideration.

*i*) The interest drawn on the sums lying to the credit of employees who have not completed 10 years service in the Bureau shall, unless the Directing Committee decides to the contrary, be placed to the credit of the " Death and Invalidity Fund ".

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## 54. Reports of Proceedings of the Conference. (C)

[Page 63]

PROPOSAL OF THE BUREAU :

The methods of producing the Reports of Proceedings of the First (London, 1919) and Second (Monaco, 1926) International Hydrographic Conferences both proved not only expensive but lengthy.

It is proposed, therefore, that a new method be adopted for the Report of the present Conference, this method being the following : —

I. — The Report of Proceedings will be a *summary* report only.

II. — The summary report of each session (whether Plenary Session or Session of a Committee) will be drawn up and distributed to the Delegates within 24 hours of the closing of the session.

III. — Delegates will be enabled to have important statements which are made during the sessions inserted *in extenso* in the Report of Proceedings.

*With reference to I : —*

The Report of the London Conference was issued as a summary only. As far as the Directing Committee is aware it has given every satisfaction ; the only complaint which has been made with reference thereto is that it was not issued in both the languages of the 1919 Conference. The Report of the present Conference will be issued in both French and English, as laid down in Article 51 of the Statutes.

*With reference to II : —*

It is imperative that summaries of discussions be drawn up by some person who was present during the discussions and as soon as possible thereafter ; the Secretary of the session appears to be indicated, for perference. As he can scarcely be expected to make summaries all night and attend sittings all day, it is necessary that one and the same Committee (or the Plenary Session) shall not meet on two successive days, or that if it meets in the forenoon (or afternoon) of one day it shall not meet again until the forenoon (or afternoon) of the next day. Thus, while another Committee is meeting, the Secretary of the first will have time to draw up the summary report and have it typed, duplicated and distributed.

The system of producing the summary report which will be employed, should the Conference approve of such report, is as follows : —

> "The Secretary of the Session and the Stenographic Reporter will go through the whole of the discussions, the former dictating a summary of each speech as it is read to him by the latter. Stencils will be made from the stenographic notes of the dictated summary, thus obviating the necessity of typing the discussions *in extenso*. The summary report of each session will be distributed as soon as it is ready."

*With reference to III : —*

Delegates who have an important statement to communicate are urgently requested to put it in writing and to hand it to the Secretary of the Session as soon as it has been read to the assembly. Should this be impossible, e. g. when an important declaration is unexpectedly necessitated by the course of a discussion, the Delegate who makes it should preface the statement with the words "I desire that the following declaration be reported *in extenso*" or some similar expression.

Unless this is done or the declaration is given in writing to the Secretary not later than an hour after the closure of the session, all speeches will be summarised.

## 55. Date of next periodical Conference.

Proposal made by the Delegate of the Argentine Republic.

Considering that under Article 49 of the Statutes of the International Hydrographic Bureau, regular Conferences meet as a general rule every five years, it would be advisable to decide now on what date the next Conference will convene.

The season was chosen for the present Conference on account of the greater facilities it presented for the Delegates from distant countries, and also because it is easier to find suitable accommodation in hotels at the end of the season. The same season would seem very suitable for the meeting of the next regular Conference.

It is therefore proposed that the next regular Conference should meet about 10 days after Easter 1932, which falls on March 27th.

SECOND PART.

# PLENARY SESSIONS

## A. REPORT OF PROCEEDINGS OF THE MEETINGS.

### 1st PLENARY SESSION.

(9th APRIL, 1929)

The session was opened at 2.30 p.m. with Ingénieur Hydrographe Général P. DE VANSSAY DE BLAVOUS in the Chair, Member of the Directing Committee of the International Hydrographic Bureau, followed by Rear-Admiral W.S. CROSLEY (U.S.A.).

*COMMUNICATIONS BY THE CHAIRMAN.*

THE CHAIRMAN (translation) repeated the good wishes with which he had welcomed the Delegates of nineteen nations represented at the Conference at the opening meeting. Only three countries, Brazil, China and Siam, were unable to send Delegates.

The Chairman then made a few observations with regard to the arrangement of the seats, which had been effected according to the names of the heads of the Delegations.

With a view to avoiding delay the Directing Committee proposed that the debates should be summarised instead of being reported at full length.

He suggested that four Committees should be appointed, of which two should consist only of three members each, one to study finances and the other to report on the work done by the Bureau. The other two Committees, which would be larger, would be instructed to examine the new proposals relative to charts and technical documents. All other questions would be discussed at the Plenary Sessions. The Finance Committee would sit at the same time as the Committee on Charts ; the Committee on Technical Documents would sit at the same time as the Committee on the Work done by the Bureau.

The Chairman announced that several Delegates had expressed the wish to make some communications. Dr. Maurer, who was prevented for reasons of service from coming to Monaco, had entrusted his communication to another member of the German Delegation. The Chairman suggested that the communications should be made at 6 p.m., Dr Maurer's on Friday 12th, and Commodore Reinius' on Wednesday, 17th April.

In order to give to the members of the Conference the opportunity of forming an opinion on the General Bathymetric Chart of the Oceans, this chart has been assembled and placed on view at the Hydrographic Bureau and there is another at the Oceanographic Museum.

The exhibition of hydrographic appliances will be held on the premises of the Tir aux Pigeons. It will be open every day till the 19th, from 10 a.m. to 6 p.m.

The members of the Directing Committee are at the disposal of the Conference. They think it advisable to be present at all the debates in order to make sure that the decisions of the Conference shall be carried out in the spirit in which they were made.

## *ELECTION OF THE PRESIDENT.*

Ing. Hydrographe Général Fichot (France) (translation) proposed that Admiral W.S. Crosley, Delegate of the United States, should be appointed President of the Conference in view of the great skill with which he had presided over the Conference in 1926.

Commander Rasikotsikas (Greece) and Captain Caballero y Lastres (Peru) seconded this proposal.

(*Rear-Admiral W.S. Crosley (United States) was elected President of the Conference by a show of hands*).

## *ELECTION OF THE VICE-PRESIDENT*

Captain Caballero y Lastres (Peru) (translation) proposed the election of M. Fichot (France).

This motion was seconded by Captain Edgell (Great Britain) and Commander Rasikotsikas (Greece).

(*The motion was put to the vote and unanimously adopted*).

(The meeting was suspended to allow Delegates to confer among themselves concerning the appointment of the members of the Committees).

The session was opened again at 3.15 p.m. under the presidency of Rear-Admiral W.S. Crosley (U.S.A.).

## *ELECTION OF THE SECRETARY-GENERAL.*

The President, calling to mind the various services rendered by Commander Spicer-Simson at the last Conference, proposed to elect him to the post of Secretary General.

(*This proposal was unanimously adopted*).

*RETURN OF THANKS BY THE PRESIDENT.*

THE PRESIDENT expressed his gratitude to the Conference for the honour which the members of the 1926 Conference had done him in calling him again to the Presidency. It was a proof of their confidence in him and of the confidence which the new Delegates had in the members of the 1926 Conference.

*LETTER OF SYMPATHY TO ADMIRAL NIBLACK.*

THE PRESIDENT, speaking on behalf of the Conference, proposed to address to Admiral Niblack a letter expressing the sympathy of the Delegates as well as the hopes they entertained for his prompt recovery. They all knew and appreciated the valuable work done by Admiral Niblack and did homage to his great competency.

(*Applause*).

The Secretary General was entrusted with the drafting of this letter.

## 54. Report of Proceedings of the Conference.

THE PRESIDENT opened the discussion on this subject.

CAPTAIN LUYMES (Netherlands) referring to the Minutes of the Conferences of 1919 and 1926 proposed that the tradition already established should be maintained and the idea of concentrating the Minutes should be abandoned. It would be a delicate matter to make a summary of the Delegates' observations, which would have to be submitted for their approval. Moreover, the Bureau had made provision to allow the Delegates to submit their speeches in writing and, when this is done, they would be published in extenso. Could one be certain that such written texts would be more interesting than the speeches made during the meetings? Such a mixed system would in any case destroy the harmony of the Minutes.

THE PRESIDENT gave an example of the system contemplated by the Bureau. The despatch of the letter to Admiral Niblack would be condensed in the Minutes as follows :

" The President proposed that a letter of sympathy should be sent in the name of the Conference to the President of the Directing Committee of the Hydrographic Bureau. The Secretary General was instructed to prepare a draft. "

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) pointed out that the Minutes of 1926 were published fairly late, while it will be possible to issue the Report promptly this time. The Minutes were not given in-extenso at the Conference of 1919.

COMMANDER SPICER-SIMSON (Secretary General I.H.B.) reminded the

Meeting that the summary of the London debates was based on the Minutes which were taken down in-extenso ; it was now proposed to make an analytical report.

Commodore Reinius (Sweden) seconded Captain Luymes' proposal.

H.E. Napier Tomlin Pasha (Egypt) quoted the example of the League of Nations, whose numerous committees usually confined themselves to a summarised report which gave every satisfaction.

Captain Luymes (Netherlands) (translation) insisted upon his proposal and supported his argument with a personal example Being desirous of studying the proposal made by the Hydrographic Bureau with regard to the question of Sea and Ocean limits, he had only been able to trace the matter to its source after reading the complete Minutes of 1919. He thus perceived that the question of Sea and Ocean limits should not only be contemplated from the point of view of Notices to Mariners but also from that of Sailing Directions.

The President referred to the explanation given by the Hydrographic Bureau in the first paragraph of the second page of the programme which had just been distributed.

> "The Directing Committee considers also that the publication of a Report of Proceedings in-extenso, which leads to great expense and can only be carried out with considerable delay, is neither necessary nor desirable for it entails the despatch of proofs to all the Delegates, who frequently introduce numerous changes in the wording of their remarks, thereby involving complete reediting of the text".

Personally he was of opinion that it was easier to consult a report which had been clearly summarised than Minutes given at length, which in any case made wearisome reading. Further, the analytical system allowed for economy in time and money.

Commander Brivonesi (League of Nations) (translation) confirmed that the experience of the League Committees with the summarised minutes had been entirely satisfactory. The Delegate concerned to whom the provisional minutes are communicated during the meetings has every opportunity of making essential corrections where the drafting seemed unsatisfactory.

Commodore Reinius (Sweden) saw a great difference between the Commissions of the League of Nations which hold numerous sittings and the International Hydrographic Conference which holds a meeting only once in five years.

The Secretary General referred to the recommendations inserted in the resolution that had decided the convening of the first Supplementary Conference, in which it is stated that the "Bureau should provide for the cost of this Conference by reducing the expenses in other directions" (page 113 of the Minutes of the Second Conference).

The preparation and printing of a report in-extenso would mean increased expense, which would be felt all the more because it would be

necessary to meet the expenses of two Conferences in the current quinquennial period.

Nevertheless, it would not be necessary to raise the contributions of the States Members, though the Bureau would feel rather impeded in its subsequent work.

THE PRESIDENT cited as an example that what had just been said should be summarised in the Minutes as follows : The Delegate of the Netherlands proposed that the report of the meetings should be printed in full ; this proposal was seconded by the Delegate of Sweden. After discussion the motion was put to the vote with the following result.

CAPTAIN LUYMES (Netherlands) was under the impression that the financial situation was not so bad as the Secretary General's observation might lead one to suppose and the difference in cost of printing was not great. It was probably quite exceptional that two international conferences would be held during the period of five years.

Moreover, if the Conference adopted the method suggested by the President the summary would be quite unintelligible since the example quoted by the President omitted the reasons which had led Captain Luymes to make his proposal and on account of which he considered another procedure preferable.

THE SECRETARY GENERAL feared that his remark had been misunderstood. He was not referring solely to the cost of printing the reports but also to the expenses incurred in the preparation for the Conference, the shorthand service and the considerable cost of correcting the proofs. Certain Delegates made radical changes in the texts submitted to them so that the speakers who followed them were compelled in their turn to change the speeches made ; the printers were then obliged to destroy the type set up and all this costs a great deal nowadays.

CAPTAIN EDGELL (Great Britain) agreed with the remarks submitted by the Delegate of Egypt. A summary which is distributed promptly after the meeting is more useful than a complete text distributed a long while afterwards.

COMMANDER MIURA (Japan) on behalf of the Japanese Delegation seconded the proposal made by the Bureau for the reasons explained by the President.

THE PRESIDENT called upon the Conference to decide in favour of one of the following two proposals. The Conference adopts the procedure proposed by the Bureau, or : the Conference decides that the report should be printed in full.

He thought that he should first put to the vote the proposal made by the Bureau which was supported by several Delegations and which was in favour of abbreviating the report.

COMMANDER RASIKOTSIKAS (Greece) (translation) proposed the following addition to the Bureau's proposal : " Provided that the minutes are distributed before the following meeting. "

THE PRESIDENT asked if this motion was seconded.

H.E. Napier Tomlin Pasha (Egypt), before coming to any conclusion, wished to know if this was possible.

The President said that it would be possible to distribute the report of each meeting 24 hours later.

(*The Bureau's proposal : the immediate distribution of a summarised report was put to the vote and adopted by show of hands*).

## *APPOINTMENT OF FOUR COMMITTEES.*

The President opened the debate on the proposals made by the Bureau concerning the appointment of four Committees, two of them being of three members only :

*a*) to examine and report on the Finances of the Bureau ;

*b*) to examine and report on the Work done by the Bureau ;

and the other two large Committees :

*c*) to examine and report on the new proposals relating to Charts ;

*d*) to examine and report on the new proposals relating to Technical Documents.

Captain Luymes (Netherlands) said he would prefer to keep to the methods followed in 1926, which allowed each Delegate to have his name inscribed in any Committee. If the proposal of the Bureau were adopted, there was a risk that questions, which could be solved with sufficient efficiency by larger Committees than those appointed by the Conference, would have to be discussed in Plenary Session.

The President regretted that he had, in 1926, accepted the appointment of too large Committees. These Committees soon became as full as the Plenary Conference, which caused a lot of inconvenience. Full Committees were sometimes difficult to close at the proper time ; their minutes were often too long and their activity hampered that of the Plenary Conference.

The President would prefer to appoint Committees which should not have too many members. However, he did not think it necessary to limit them to three members, as was suggested by the Bureau for the first two Committees.

H.E. Napier Tomlin Pasha (Egypt) was in favour of the suggestion made by the President. The work was done more smoothly and more quickly by small Committees. He suggested, however, that the first two Committees should consist of five members instead of three.

The Vice-President (translation) reminded the Conference that in order to remedy the disadvantages which occured in 1926 steps had been taken this year to put into effect a suggestion made by Captain Luymes namely, to gather as many Delegates as possible in one hotel and thus enable them to engage in unofficial conversations regarding the items on the Agenda and to form an opinion more easily. In this manner the system of small Committees would not result in the inconvenience due to the procedure followed in 1926.

As Delegate of France he was quite willing to support the proposal to increase to five the number of the members of the first two Committees.

THE SECRETARY GENERAL stated that from to-morrow a special room would be reserved for the Delegates in the hotel where the majority were staying, in order to enable them to hold unofficial meetings for the purpose of studying any question they might consider advisable.

THE PRESIDENT stated that the Bureau accepted the proposal to increase the number of members of the first two Committees to five.

CAPTAIN LUYMES (Netherlands) accepted the principal that the Committees should be as small as possible. He would, however, like the Delegations to be invited to distribute their Delegates among the Committees.

THE PRESIDENT asked Captain Luymes if he was in favour of the proposal to appoint five members to each of the first two Committees.

CAPTAIN LUYMES (Netherlands) replied that he preferred that these Committees should be composed of five members rather than of three.

THE PRESIDENT called on the Conference to give its opinion concerning the following motion :

" That four Committees be appointed namely ; two of five members each :

*a*) to examine and report on the Finances of the Bureau.

*b*) to examine and report on the Work of the Bureau ;

and two large Committees :

*c*) to examine and report on the new proposals with reference to Charts ;

*d*) to examine and report on the new proposals with reference to Technical Documents. "

He then suggested the following procedure for the appointment of the members of these Committees : each Delegate would be invited to write his name on a sheet of paper and underneath the names of the four Committees in order of preference. In constituting the Committees the Chair would as far as possible give effect to the wishes of the Delegates.

CAPTAIN PARKER (United States) seconded the suggestion and proposed the adoption of this procedure.

H.E. NAPIER TOMLIN PASHA (Egypt) supported the motion and suggested further that if any of the Delegates did not indicate their preference the Chairman would ipso facto be entitled to appoint them to any of the Committees.

THE PRESIDENT asked the Delegates to give their opinion on the proposal which he had just made concerning the appointment of the Committees.

(*This proposal was adopted by a show of hands*).

THE PRESIDENT then asked the Conference to vote on the third paragraph of the proposal of the Bureau : " That all other questions of which notice has been given be dealt with in Plenary Session. "

(*This third paragraph was put to the vote and adopted by a show of hands*).

THE PRESIDENT asked the Conference to vote on the fourth paragraph of the proposal of the Bureau : " When the Conference has been organised that, in principle, Plenary Sessions be held in the forenoons and Committee Meetings in the afternoons. "

(*The fourth paragraph was put to the vote and adopted by a show of hands*).

(The meeting was interrupted at 4.20 p.m. in order to allow the Delegates to write their wishes concerning the composition of Committees. It was reopened at 4.30).

THE PRESIDENT announced that a tentative programme for the work of the Conference would be posted in order that the Delegates might know when each question would be discussed. The figures after the dates referred to the publication entitled " Proposals. "

The President informed the members that a telephone message had been received from Admiral Niblack welcoming the Delegates.

REAR-ADMIRAL YONEMURA (Japan) read the following statement of which the text had been circulated to the Delegations.

" In my humble opinion, profound thanks are due from us seamen and maritime people of the world for the most distinguished and highly meritorious services rendered in the past by the I. H. B. and the I. H. C., and we owe it to ourselves to endeavour to develop more and more the active field of hydrography through the continued efforts of the staff of the I.H.B. and the assistance and co-operation of the Hydrographic Services of the States Members. The Japanese Hydrographic Department, therefore, considers itself highly honoured by being enabled to present to the Bureau free of charge 825 charts as recently requested by the Bureau. I am submitting to this Conference for distribution among you the other publications of this Department as shown on the attached list, in the hope that they may serve as data for the execution of certain of your inquiries.

" I have the honour to submit for your consideration at the commencement of the present Conference the following general remarks :

" 1. The Japanese Hydrographic Department finds it very difficult to adopt any proposal for the alteration of the symbols and abbreviations which have received the sanction of long usage, where such alteration cannot be accomplished without reprinting the existing charts. I believe that the same view is shared by the other Hydrographic Services carrying a large number of charts. With your permission, I shall refer to what heavy sacrifices this Department is submitting in order to reduce its charts to the metric system at its own discretion (in consequence of the alteration by law of Japanese standards).

" The Japanese Hydrographic Department has incurred an expenditure of about £ 90,000 during the past five years since starting to reprint its charts on the metric system, and has applied to the Japanese Government for a further appropriation of about

£250,000 spread over a number of years, this being the estimated cost of the entire work of revision. Moreover this Department has to undertake annually at least 10% extra work for the execution of this work.

"This is an example to show what a heavy sacrifice would have to be made possibly by Japan only. In addition, I think that it is very difficult to alter the decisions previously adopted by the London Conference, and which this Department is actually carrying into practice.

"It is highly desirable that problems of this nature should be thoroughly investigated before any decisions are taken and such decisions, if adopted, should thenceforth be strictly adhered to, even at the cost of certain inconveniences attaching to them.

"2. I desire that the Conference should devote its attention to the discussion of new subjects accompanying the progress of time such, for instance, as the depth-sounding by echo, the utilisation of radio, or chart symbols required for aerial navigation ; the earlier and more extensively such universal systems are established and adopted the more useful they will prove.

"Being unversed in the official languages of the Conference, in English as in French, I have adopted the expedient of addressing you the foregoing general remarks at this opportunity before entering into detailed discussion on the respective subjects at the general meeting when such subjects come up for consideration and in doing so I am much obliged for your appreciation of my intention in the belief that I shall thus be communicating better than in any other way my opinions to the Delegates of the other States Members."

THE PRESIDENT announced that the next Plenary Meeting would take place to-morrow morning at 9.30.

(The meeting was adjourned at 4.45 p.m.).

# 2nd PLENARY SESSION.

(10th April 1929)

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The meeting opened at 9.30 a.m., the President, Rear-Admiral W.S. Crosley (U.S.A.) in the Chair.

## *ADOPTION OF THE MINUTES OF THE LAST MEETING.*

No objections were raised to the Minutes of the First Plenary Session, *which were adopted.*

## *DESPATCH OF A TELEGRAM OF SYMPATHY ON THE DEATH OF COLONEL JONES, DIRECTOR OF THE UNITED STATES COAST AND GEODETIC SURVEY.*

The Vice-President (translation) stated that Captain W.E. Parker, representing the Coast and Geodetic Survey, had received a telegram to-day announcing the death of Colonel Lester Jones, Director of the Coast and Geodetic Survey. In view of the important part taken by the head of this great Department in all questions relative to hydrography and geodesy, he believed that the Conference would be unanimous in desiring to send an expression of its regret to the Coast and Geodetic Survey Department and assure the family of the deceased of its profound sympathy in their loss.

Captain Edgell (Great Britain) seconded this motion *which was adopted.*

## *COMPOSITION OF THE COMMITTEES.*

The President announced that, following the decision made yesterday by the Conference, the Presiding Officers had tabulated the list of the four Committees contemplated. The two larger Committees were first appointed (Committee on Charts and Committee on Documents) by the Presiding Officers, who endeavoured to meet the wishes of the Delegates and regretted that they could not give satisfaction to all.

Lists of the Members of the Committees were posted on the board.

**CHARTS COMMITTEE.**

| | |
|---|---|
| Commander BJORSET | *Norway.* |
| Commander BRIVONESI | *League of Nations.* |
| Ingénieur Hydrographe en chef COT | *France.* |
| Captain EDGELL | *Great-Britain.* |
| Rear-Admiral HERRERO | *Spain.* |
| Commander KURZE | *Germany.* |
| Lieutenant-Commander KUSAKARI | *Japan.* |
| Commander PARKER | *U. S. A.* |
| Commander RASIKOTSIKAS | *Greece.* |
| Commodore REINIUS | *Sweden.* |

**COMMITTEE ON DOCUMENTS.**

| | |
|---|---|
| Commander BRIVONESI | *League of Nations.* |
| Captain CLAUSSEN | *Germany.* |
| Lieutenant-Commander DAY | *Great Britain.* |
| Commander HERRERA | *Chile.* |
| Lieutenant-Commander LOPES | *Portugal.* |
| Captain LUYMES | *Netherlands.* |
| Regierungsrat Dr. RAUSCHELBACH | *Germany.* |
| Commodore RAVN | *Denmark.* |
| Commander SAILLANT | *France.* |
| Professor TENANI | *Italy.* |

**FINANCE COMMITTEE.**

| | |
|---|---|
| Captain BAUM | *U. S. A.* |
| Commander ETCHART | *Argentine Republic.* |
| Captain HOOYKAAS | *Netherlands.* |
| Commander MIURA | *Japan.* |
| Lieutenant SLIWERSKI | *Poland.* |

**COMMITTEE ON THE WORK DONE BY THE BUREAU.**

| | |
|---|---|
| Captain CABALLERO Y LASTRES | *Peru.* |
| Captain LUYMES | *Netherlands.* |
| H. E. NAPIER TOMLIN PASHA | *Egypt.* |
| Captain ROMAGNA-MANOIA | *Italy.* |
| Rear-Admiral YONEMURA | *Japan.* |

THE PRESIDENT added that the mere fact that his name did not appear on a Committee did not prevent a member from attending the Committee as a listener or an observer.

Further, members of Committees would be allowed to effect an interchange among themselves from one Committee to another on condition that the number of members on any Committee was not thereby increased.

## *COMMUNICATION FROM SIAM.*

The President read the following extract from a letter sent to the Conference by Siam, a State Member of the Hydrographic Bureau :

No. $7/\frac{2471}{0641}$ of 18th June, 1928.

I. H. B. 1919/28 - 16/46
23. VII. 28.

.....

(3) Siam has no list of subjects and questions to be discussed at the Supplementary Conference but is willing to conform to any decision of the majority of the Conference, and eagerly looks forward to receive one copy of each technical publication which is to be distributed gratis for each of the Surveying Expeditions of the States Members which has more than two Surveying Officers There are two Surveying Expeditions in the Siamese Hydrographic Department at present, and each has more than two officers.

(4) The amendments to the Statutes: Articles 34 b and 57 b are approved.

(*The Conference noted this communication*).

## *NEW TONNAGE.*

*a*) Communication from Italy.

The President stated that in accordance with the Statutes Italy, a State Member of the Hydrographic Bureau, had sent a revised tonnage figure (namely 3,650,000 tons) with the request that it should be substituted for the former figures contained in the Table of Tonnages; this would entail changes in the contributions and privileges.

*b*) Communication from the Argentine Republic.

Commander Etchart (Argentine Republic) (translation) stated that the tonnage figure in the Argentine had now been increased to 489,000 tons instead of the former figure 220,000 tons.

The President asked the Conference if it was prepared to accept the two new figures.

Commander Rasikotsikas (Greece) (translation) proposed the adoption of the two figures.

(*They were adopted*).

## 54. Report of Proceedings of the Conference.

THE PRESIDENT referred to the proposal contained in Item 54, page 63, of the pamphlet "Proposals made by the States Members and by the Directing Committee of the Bureau to be submitted for discussion at the First Supplementary International Hydrographic Conference of 1929."

This item had already been discussed and decided at yesterday's meeting. However, the decision was somewhat more complete concerning the Minutes of Committees.

CAPTAIN BAUM (U. S. A.) proposed the adoption of proposal N° 54 made by the Bureau.

*(This proposal was adopted unanimously).*

## 49. Conditions to be fulfilled for admission as a Member of the International Hydrographic Bureau. (Art. 5b)

THE PRESIDENT desired before opening the discussion on question N° 49 to remind Delegates that during the Conference of 1926 a Committee had been instructed to study the Statutes and the proposed amendments. This Committee had accomplished a considerable amount of work and the President hoped, therefore, that the present Conference would not change the articles adopted in 1926, the more so as the modifications suggested appeared to him to be more loosely expressed than the texts at present in force and, above all, they gave no precise indication of the amounts of the contributions to be paid by a State Member.

CAPTAIN CLAUSSEN (Germany) proposed the adoption of the amendments to Article 3 of the Statutes suggested by the Directing Committee, but considered that the amendment to Article 63 should be rejected. It was probable that a liquidation of the Bureau need only be contemplated if the financial situation showed a deficit and in that case the liquidation would have to take place fairly quickly. Such an eventuality would occur if one or more of the States Members who are the largest contributors decided to withdraw from the Bureau and it would then be quite unjust that the countries which are only just in a position to pay their normal annual contributions should have to shoulder a part of the deficit. It would almost amount to a punishment for having long been a faithful Member of the Bureau. The Delegate of Germany was therefore of opinion that the present drafting of the Statutes was quite justified and should not be changed. For this reason he proposed that the amendment to Article 63, suggested by the Directing Committee, should be rejected.

COMMANDER ETCHART (Argentine Republic) (translation) supported the drafts submitted by the Directing Committee, which appeared to him likely to facilitate the admission of other States as new Members of the Bureau, and this was certainly in the general interest.

The Secretary General (translation) announced that enquiries had been received by the Bureau from three States non-Members of the Bureau but who seemed desirous of becoming Members. These enquiries have not yet resulted in applications for membership, and this is perhaps owing to the fact that, the assets of the Bureau having greatly increased since its foundation, new Members now have to pay a comparatively high entrance fee.

Captain Luymes (Netherlands) noticed that the second paragraph of the Proposals made by the Bureau stated that these articles "have not yet been enforced." Yet the States Members were notified by a circular letter dated 4th March, 1927, that the new Statutes had been in force since the 1st January, 1927. Is there not a certain contradiction ?

The President replied that the Statutes were really in force since 1st January, 1927, but that the opportunity had not yet arisen to enforce them as no application for admission had been received since that date.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I.H.B.) agreed and added that the fact that no new application for admission had been received since the new Statutes had come into force made it easier to amend those Statutes now.

Besides the reasons which led the Bureau to propose the amendments now submitted to the Conference, which were given in the book distributed, there was a reason which he wanted to emphasise : the present Statutes did not make any provisions where a State formerly a Member of the Bureau applied for re-admission. This was a case which should be considered and which it is hoped may arise soon. It was therefore important to be more precise in the Statutes.

Moreover, the Statutes did not at present make sufficient provision should it be necessary to liquidate the Bureau. These reasons justified the proposed amendments.

Commander Rasikotsikas (Greece) (translation), speaking on behalf of the Greek Delegation, regretted his inability to support the proposals made by the Directing Committee.

He was of opinion that Article 3, paragraph 2, would check States who desired to be admitted to the Bureau, since the Bureau's assets were increasing daily.

The Delegate of Greece proposed that Article 3, paragraph 2, should be replaced by a text specifying that any State becoming a Member of the Bureau should pay a fixed sum in proportion to the number of its votes. This contribution might be established at 2,000 gold francs for each vote and no State need be perturbed at this amount.

Ing. Hydrographe General Fichot (France) (translation) was in favour of the suggestion made by the Directing Committee except as regards liquidation in case of a deficit. He was much struck by the remarks submitted by Captain Claussen and recognised their justice. There would be no difficulty if the Bureau had to go into liquidation at a time when the financial situation was favourable: the States which had paid the most would receive the most. It would, however, be necessary to find a fresh formula in order to meet the

eventuality of a liquidation taking place under a financial deficit. It might perhaps be advisable to invite the Directing Committee to examine this point and submit to the Conference a draft which would meet such a case.

THE SECRETARY GENERAL pointed out that the suggestion made by Commander Rasikotsikas would have the effect of precisely doubling the contribution. In accordance with the present Statutes the contribution for the first year was increased by about 70%.

ING. HYDROGRAPHE GENÉRAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) pointed out that the objection raised by the Delegate of Germany and supported by M. Fichot with reference to Article 63 of the Statutes and the new proposals submitted by the Directing Committee could also be made with respect to the previous drafting of Article 63.

He added that the Directing Committee were fully prepared to seek another formula, but he did not well see how the problem could be solved and would be glad if the Conference would lay down guiding principles.

THE VICE-PRESIDENT (translation) replied that it was precisely because the problem was so delicate and because it was difficult to discover a formula at once that he had proposed that the matter should be referred to the Directing Committee.

COMMANDER BJORSET (Norway) supported by COMMODORE REINIUS (Sweden) seconded M. Fichot's motion.

CAPTAIN EDGELL (Great Britain) was also in favour of this proposal. He was of opinion that immediate approval could be given to the suggestions of the Directing Committee by deleting the second part of Article 63 (v) as it stood on page 59 of the "Proposals." The Conference might adopt the following text : "63 (v) The credit or debit balance of the Bureau shall be divided amongst the actual members at the moment when the suppression is decided upon."

It would be possible to examine subsequently a supplementary proposal showing how the division of this balance among the States should take place.

COMMANDER RASIKOTSIKAS (Greece) (translation), desirous of meeting the objection raised by the Secretary General, amended his proposal, reducing the figure of 2,000 francs per vote to 1,000.

He then seconded the proposal made by M. Fichot concerning Art. 63.

CAPTAIN CLAUSSEN (Germany) also seconded the remarks made by M. Fichot and proposed to adopt straight away the proposals made by the Bureau relative to Article 3 and to adjourn the decision on Article 63 (v) till the Bureau had given it further consideration.

THE VICE-PRESIDENT (translation) agreed entirely with Captain Claussen and also with the proposal made by Captain Edgell not to vote on Article 63, but it must be understood that this Conference would adopt a text before the end of the session. A proposal concerning this item could be submitted by the Directing Committee in the course of a few days.

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) thought that the suggestion made by the British Delegate could be carried out. In the event of the two first lines of Art. 63 being adopted, it would

perhaps be necessary to decide with greater precision what should be done in the case of the Bureau being dissolved.

Commander Bjorset (Norway) called the attention of the Delegates to the fact that a dissolution was not likely to occur. However, M. Fichot's proposal seemed to meet all cases and, amongst them, that of a Member wishing to resign.

H.E. Napier Tomlin Pasha (Egypt) would welcome the adoption of M. Fichot's proposal, it being understood that the question would be decided by the present Conference.

The President thought that it would be necessary to let each Member know how he would be situated should the Bureau be dissolved. This question could, however, be settled fairly soon. The best way to find its solution was to appoint a small Committee which would co-operate with the Bureau in drafting a text which could be considered by the Conference to-morrow morning.

The President suggested that the Conference should vote on the amendments proposed by the Bureau to Article 3, as shown on page 58 of the Proposals.

(*The amendments to Article 3 were adopted by a show of hands*).

The President proposed that a Committee composed of Captain Claussen, Captain Edgell and Commander Rasikotsikas should be instructed to approach the Directing Committee with a view to drafting a new text to replace Article 63 (v).

(*This proposal was adopted*).

## 50. Keeping up-to-date of the Table of Tonnages. (Art. 34)

The President reminded the Conference that he had co-operated in the preparation of Article 34 (b). He had understood in 1926 that the Directing Committee should collect all information until the date fixed for a periodic Conference and that this information should be submitted to such Conference. All the Delegations had not interpreted this text in the same manner.

The proposed amendment would make such differences of interpretation impossible. Its adoption was therefore desirable.

Captain Luymes (Netherlands) drew attention to the last paragraph in the comments of the Bureau :

> " The Directing Committee considers that it is undesirable to submit such tonnage figures to the Conference or to the Members for approval as the figures supplied by the Governments cannot be questioned. "

If it were decided to eliminate this approval, then it would appear that it should be suppressed in the other articles also, more particularly Article 35 (a) and Article 37.

COMMANDER ETCHART (Argentine) and CAPTAIN CLAUSSEN (Germany) were in favour of this suggestion.

THE PRESIDENT proposed that effect should be given to Captain Luymes' proposal and that the following text should be adopted :

> " All mention in these Statutes of approval by a Conference or States Members of figures furnished by a State Member is eliminated. "

(*This motion was adopted by a show of hands*).

(*Proposal N° 50 was adopted*).

## 51. Votes of States which are not Members of the Bureau. (Art. 57b)

(*This proposal was adopted by a show of hands*).

## 50a. Contribution of the Principality of Monaco. (Art. 35b)

THE PRESIDENT reminded the Conference of the proposal to remit the contribution of the Principality of Monaco in consideration of the fact that it was placing premises at the disposal of the Hydrographic Bureau. For this purpose it would be necessary to amend the Statutes and he proposed the following next :

> ART. 35 (b). — The Principality of Monaco is treated on a special basis. In consideration of the fact that it provides offices rent-free for the Bureau it pays no contribution but retains the votes to which it is entitled under par. (a) of this Article.

CAPTAIN LUYMES (Netherlands) seconded this motion.

(*The motion was adopted by a show of hands*).

## 52. Revision of the Free Distribution Lists of Publications of the International Hydrographic Bureau.

THE VICE-PRESIDENT (translation) suggested two amendments to the proposals of the Bureau. The first specified that the publications to be distributed free should be the Review, the Bulletin and the Special Publications. The second amendment was directed towards the following addition to paragraph 4 :

> " At the request of former Directors and former Secretaries General, the Bureau may allow them a free delivery of the publications. "

Captain Luymes (Netherlands) remarked that as regards the first amendment the Bureau might subsequently undertake the issue of other publications. As to the second point he would prefer that former Directors and Secretaries General should not have to apply for a free distribution of the publications.

The Vice-President (translation) stated that he was quite prepared to suppress the words " at the request of " and to say simply that the Bureau might make a free delivery of the publications to former Directors and Secretaries General.

The President proposed the following text in order to give effect to the first suggestion made by Captain Luymes :

> " The free delivery of those of the Bureau's publications which have been selected by the Directing Committee — such delivery to be effected at the request of the States Members — shall be limited in the following manner " :

The Vice-President (translation) had no objection to letting the Directing Committee decide what publications it considered advisable to send.

H.E. Napier Tomlin Pasha (Egypt) proposed that this text should be replaced by the following :

> " It shall be the duty of the Directing Committee to prepare the list of persons and organisations to whom the Bureau's publications should be distributed. The Directing Committee should bear the question of economy in mind. "

The Secretary General pointed out that the Directing Committee had occasionally been placed in a delicate position with respect to certain States Members of the Bureau which had paid their contributions and had applied for a supplementary delivery of documents. For this reason the Bureau had expressed a desire to be guided by a decision of the Conference itself and had inserted this question on the Agenda.

Commander Rasikotsikas (Greece) (translation) thought that the most practical way would be to have all free deliveries of publications and documents made through the agency of the Hydrographic Office of each State.

From the point of view of economy he was of opinion that the total number of copies to be distributed should be twice the number of votes allowed to each State.

Captain Luymes (Netherlands), preferred the text proposed by the Bureau to that which would leave to the Directing Committee the task of preparing the distribution list.

The Vice-President (translation) regretted having been the cause of such a long discussion on the subject of his proposed amendment.

The proposal made by Greece seemed to him disadvantageous with regard to certain States Members of the Bureau. It would be better to take into consideration the advantages which the Hydrographic Departments

might obtain from the circulation of these documents without reference to the amount of the contributions made by each State.

As the text proposed by the Bureau was based both on the need for economy and a desire to give satisfaction to the States, and since, moreover, the various amendments suggested practically amounted to the same effect, he would withdraw his motion. He added that he admitted having himself requested a supplementary delivery of documents from the Hydrographic Bureau.

THE SECRETARY GENERAL drew attention to the fact that the proposal under consideration allowed a fairly large number of copies of the publications to all States Members. Moreover, the States were able to purchase further copies at a reduction of fifty per cent of the sale price, that is below cost price.

H.E. NAPIER TOMLIN PASHA (Egypt), in view of the fact that it was essential for the Conference to come to a decision on this point, withdrew his motion and supported the proposal made by the Bureau.

CAPTAIN PARKER (U.S.A.) thought that the Bureau's proposal was sufficiently generous in order to ensure an adequate number of copies to each State. He supported this proposal and also M. Fichot's amendment.

THE PRESIDENT announced that he would put to the vote the proposal as it appeared on page 61 of the printed Proposals with the addition submitted by M. Fichot authorising the Directing Committee to make a free delivery of the publications to former Directors and former Secretaries General of the Hydrographic Bureau.

(*The motion thus amended was adopted*).

## 53. Formation of a Retirement Fund for the Staff of the International Hydrographic Bureau.

THE PRESIDENT thought that this question could be divided into two parts, that of principle and that of execution.

The former occurred as follows : Was the Conference in favour of creating a Pension Fund for the staff ?

THE SECRETARY GENERAL explained that the term " Pension Fund " should not be taken in its absolute sense. When, six months before the Conference, the printed Proposals were distributed, no clear idea had as yet been reached concerning the constitution of this Pension Fund. The Bureau had now reached the conclusion that it was not so much a matter of allowing a pension to the former officials of the International Hydrographic Bureau as of paying them a lump sum upon the termination of their service.

COMMANDER BJORSET (Norway), despite the information supplied by the Secretary General, attributed considerable importance to this question. He was of opinion that the principle of the constitution of a Fund which would be used for the grants under contemplation could only be adopted subject to a formal statement that there would be no suggestion of increasing the contributions of the States Members.

Commodore Reinius (Sweden) declared that, although the proposal was only distributed to the Delegates yesterday evening, he had read it through several times without so far being able to gather the full consequences entailed. He therefore proposed that the discussion should be adjourned in order to allow the Delegates to exchange their points of view in private conversation.

H. E. Napier Tomlin Pasha (Egypt) recommended that the President's suggestion should be followed and that a vote should first of all be taken as to the principle of the Fund and should this be accepted a draft scheme for putting the motion into effect should be referred to the Finance Committee.

Commander Etchart (Argentine Republic) (translation) considered the Bureau's proposal quite feasable, but the thought it wiser not to carry it out until such time as the Bureau had gained further Members.

Captain Edgell (Great Britain), Captain Luymes (Netherlands) and Commander Rasikotsikas (Greece) seconded the proposal made by the Delegate of Egypt.

The President gave further details. The proposal before the Conference was to create a Fund which would be used for making grants to the officials on the expiration of their terms of service. The organisation of this Fund would be referred to the Finance Committee for examination.

(*A vote was taken with the following result :*

*In favour of the Bureau's proposal* 10 *votes.*
*Against* » » 6 »
*There were a few abstentions*).

H.E. Napier Tomlin Pasha (Egypt), in view of the above result, proposed to amend the decision, or rather to supplement it with the statement that it was agreed that no increase in the amount of the contributions to be paid by the States Members should be entailed. He hoped that, thanks to this addition, a larger number of Members would adhere to the principle of the Pension Fund.

Lieutenant Albert (Assistant, I.H.B.) gave details regarding the Bureau's budget which would, he hoped, relieve certain Delegates of their fears concerning the possible effects of this proposal on the contributions.

The total amount provided for the salaries of the staff of the Hydrographic Bureau in the budgets of the last few years was 80,000 gold francs. In point of fact the salaries had not exceeded 70,000 gold francs. The draft scheme for the Pension Fund provided for an annual contribution on the part of the Bureau of ten per cent of the salaries, which would thus amount to a sum of 7,000 gold francs per annum. This expenditure was relatively slight in a budget amounting in all to 300,000 gold francs ; it constituted slightly more than two per cent.

At the invitation of the President, the addition proposed by H.E. Napier Tomlin Pasha was seconded by Captain Claussen (Germany), Commander Rasikotsikas (Greece) and Captain Luymes (Netherlands).

CAPTAIN PARKER (U.S.A.) in view of the lack of unanimity shown by the Conference even with regard to the question of principle, suggested that this discussion should be postponed to a subsequent meeting in order to allow the Delegates to engage in unofficial conversations on the matter.

REAR-ADMIRAL HERRERO (Spain) (translation) seconded this suggestion.

CAPTAIN CABALLERO Y LASTRES (Peru) recommended that the President's proposal should be adopted.

(*The proposal to postpone the question was not adopted*).

THE PRESIDENT invited the Conference to vote on the following question. A fund was to be raised from which grants should be paid to members of the staff who left the Bureau. This measure not to entail any increase of contribution from the States Members.

(*This proposal was adopted*).

(*The putting into effect of this decision was referred to the Finance Committe for further examination*).

## *COMMUNICATIONS RELATIVE TO MEETINGS OF COMMITTEES.*

In reply to a question put by COMMANDER RASIKOTSIKAS (Greece), the PRESIDENT stated that the two large Committees (Charts and Documents) would meet in the Conference Hall and the other two (Finance and Work) at the premises of the Hydrographic Bureau.

(The meeting was adjourned at 12.10 p.m.).

# 3rd PLENARY SESSION.

(11th April, 1929.)

The meeting was opened at 9.30 a.m., with the President, Rear-Admiral W.S. Crosley (U. S. A.) in the Chair.

## *ADOPTION OF THE MINUTES OF THE LAST MEETING.*

The President invited the Delegates to read through the Minutes of yesterday's meeting and submit any comments they might care to make.

*(The minutes of the Second Plenary Session were adopted).*

## *COMMUNICATION FROM THE CHAIR.*

The President was asked by the Chairman of the Committee on Charts to announce to the members of this Committee that this afternoon's meeting would be held from 2 to 3.30 p.m.

He afterwards stated that each Delegation had been provided with a set of seven documents from the Coast and Geodetic Survey. A description of an instrument called an " Azimuthmeter " presented by the Greek Delegation had also been distributed to them. The instrument itself would be exhibited on a table at the other end of the hall.

## 49. (cont.) Amendment to Article 63 (v) of the Statutes.

The President stated that the Committee appointed yesterday to examine in co-operation with the Directing Committee the amendment to be made to Article 63 (v) had submitted the following draft proposal to the Conference. The new text of Article 63 (v) would read as follows :

> " The balance of the accounts of the Bureau shall be divided amongst the actual Members at the moment when the suppression is decided upon.
>
> " In the case of a credit balance, it will be divided amongst the States Members in proportion to the amount contributed by each of them since it joined the Bureau.
>
> " In the case of a debit balance, it will be divided amongst the States Members in proportion to their last annual contributions. "

ING. HYDROGRAPHE GENERAL FICHOT (France) (translation) moved the adoption of this text.

COMMANDER PARKER (U.S.A.) seconded the proposal.

(*The above draft was put to the vote and adopted*).

*CONSTITUTION OF THE COMMITTEES.*

THE PRESIDENT had been informed that several Delegates were desirous of sitting on Committees to which they had not been appointed. The Presiding Officers submitted the following proposal to the Conference :

> " The Committees on Charts and Documents, which have already been formed, may receive additional members whose presence might be considered desirable, on the understanding that no Delegation may send more than one representative to the same Committee. "

CAPTAIN LUYMES (Netherlands) seconded this proposal.

(*Adopted*).

## 1. Publication of Lists of Symbols and Abbreviations.

THE PRESIDENT invited the attention of the Conference to the fact that there existed in the United States a Board of Surveys and Maps, whose members were drawn from practically every Department of the Government and whose decisions as to symbols were binding on all the Government Departments. A schedule showing the symbols adopted by this Board is in the possession of Commander Parker and will be open to inspection at the next meeting of the Committee on Charts. If the American Delegation appeared during the discussion of this question to be somewhat stubborn at times, this was due to the fact that their hands were tied by the decisions of this Board.

COMMANDER BJORSET (Norway) was doubtful as to the advantages which would result from the publication of the manual, as proposed by the Hydrographic Bureau.

The aim of the International Hydrographic Bureau was to obtain complete standardisation of symbols as soon as possible. In drafting lists of conventional signs at present employed by each country, the I.H.B. would appear to be following an aim contrary to that for which it had been constituted. Such a manual might be found useful by the Hydrographic Services of each country, but it would be a psychological mistake to put it in the hands of the mariners.

He would therefore propose not to publish a new manual but to be content with keeping the present publication up to date.

CAPTAIN CLAUSSEN (Germany) seconded Commander Björset's observations. It was unnecessary to publish new manuals for the use of

mariners and the keeping up to date of the list at present published for the Hydrographic Offices should be wholly sufficient.

Commander Parker (U.S.A.) did not clearly comprehend the meaning of the proposal submitted to the Conference. It seemed that the publication of two manuals was contemplated. Was it in order that information which was not given in one of the manuals should appear in the other ?

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) reminded the Conference that the proposal before the members did not emanate from the I.H.B. but had been put forward by the Committee on Charts in 1926.

The President pointed out to the Delegates that they would find a report of the debate and the draft of the proposal now submitted to the Conference on page 101 of the Report of the Proceedings of the Second International Hydrographic Conference.

Captain Edgell (Great Britain) stated that the 1926 Conference had been unable to reach an unanimous decision as to the proper course to be followed.

The discussion arose in connection with an excellent publication brought out by the United States which contained a deal of very useful information on symbols ; this publication had been used for many years by Hydrographic Offices throughout the world. In 1926, however, this book was already out of date and the question arose whether it would be advisable to publish a complete and up to date list. The Committee came to the conclusion that an extensive and complete manual would be more of a nuisance than otherwise to seamen and it was then suggested that two lists should be issued, one a full and complete manual for the use of Hydrographic Offices and the other an abridged edition for seamen.

Personally he was of opinion that it was not necessary to issue any other list than the one existing.

Captain Luymes (Netherlands) disagreed with the Delegate of Norway. The aim was indeed to attain uniformity and the proposed publication would show how far they had progressed along that road. He thought that the manual should be kept up to date until standardisation had been reached. He did not believe that a more extensive manual was necessary for Hydrographic Offices since cartographers were experienced men and had time and leisure to refer to the lists published in each country. In his opinion the proper course was to maintain an abridged manual for seamen up to date and to issue supplements periodically.

H.E. Napier Tomlin Pasha (Egypt) found himself in entire agreement with Captain Edgell. In his view a complete manual would be useful for Hydrographic Offices but it should be left to the National Hydrographic Department of each country to provide their mariners with such documentation as they might consider essential.

Commodore Reinius (Sweden) regretted that he was unable to agree with Commander Björset. Uniformity would only be attained after many years. It was, therefore, necessary to have a manual containing a comparative

table. The present publication was extremely convenient for Hydrographic Offices but too bulky to be on board ship.

He would like the first page of the publication to contain a list of the symbols which had been decided upon by the International Conference and which were in international use. This would be followed by the comparative table giving the different signs employed by the various countries.

With regard to the publication of a small manual for seamen, the Delegate of Sweden did not think the moment had yet arrived for deciding this question and that it would be preferable not to come to any conclusion one way or the other, but wait for the next International Conference to subject the matter to a fresh examination.

THE SECRETARY GENERAL agreed with Commodore Reinius that it would be a long while before we could arrive at the complete standardisation of conventional signs. Till then mariners would have to employ charts issued in countries other than their own. It was necessary to make every effort with a view to employing original charts whenever it was possible to do so. A mariner who had to employ charts of a foreign country would need to refer to a kind of dictionary just as if he were speaking a language other than his own.

The Secretary General considered — and this he thought was the opinion of the Directing Committee of the International Hydrographic Bureau as a whole — that a manual would be necessary to seamen till the day when the standardisation of conventional signs employed in all countries should be attained The size of this manual was perhaps not very convenient to mariners. It would be necessary to make it smaller. This was a purely technical question on which it was necessary to ask the printer's advice.

THE PRESIDENT considered that the Conference on the whole was inclined to accept the manual suggested, at least for the Hydrographic Services. The fact that the National Hydrographic Services expressed their wish to have it was a sufficient reason for publishing it.

Mariners would be able to get copies should they care to employ them.

The President pointed out that the question to decide was whether one or two manuals would be wanted. He added that a proposal had been made to keep to the one manual — the complete edition.

The President, holding the existing volume in his hand, explained again that it was a summary prepared for the use of seamen. He thought, however, that this work had also given satisfaction to Hydrographic Offices.

It would be for the Conference to decide whether the present publication should be kept up to date or whether a new and more complete book should be issued.

COMMANDER PARKER (U.S.A.) gave his opinion in favour of the present publication for everyone. In his view it should first of all be distributed to the Hydrographic Offices and then placed at the disposal of any mariners who might care to use it.

The present edition should be kept up to date by the isuse of supplements as need might arise. As soon as the number of the supplements became unwieldy a new and revised edition should be published.

Commander Rasikotsikas (Greece) (translation) supported the proposals made by the Delegate of the United States. He thought it would be more desirable not to publish a new manual but merely a supplement containing all the symbols not given in the present edition, which should be modernised.

Commander Bjorset (Norway) did not understand the term "abridged manual" which was not quite appropriate for this volume.

He was under the impression that the present book was a complete publication and would be quite adequate if brought into line with current requirements.

The Vice-President (translation) agreed with Commander Björset. He recommended that they should confine themselves to keeping the present book up to date, since it was already sufficiently complete in itself. He hoped that thanks to the efforts made in favour of uniformity the number of symbols, far from increasing, would in effect be reduced.

The President invited the Conference to vote on the following :

> "The manual, termed 'abridged' despite its imposing dimensions, shall continue to be published by the International Hydrographic Bureau and kept up to date; it is intended for national Hydrographic Offices and shall be sold to any mariners who may desire it."

(*This proposal was adopted*).

The President noted the result of this vote and added that the word "abridged" would be left out in all subsequent editions.

## 3. Symbols for Wireless Stations.

The President presumed that the Delegates were acquainted with the proposals printed under N° 3 and opened the discussion.

Captain Claussen (Germany) pointed out that the Bureau had admitted that Germany's proposal was not incompatible with the resolution voted in 1926. It had been accepted that the letter R might be followed by such legend as any country might consider advisable. Any country might add to the letter R the legend it considered preferable.

He was of opinion that the development of these stations would make it necessary to show them on the charts, the particular character of the station being designated by means of an appropriate legend.

German seamen had asked that this information should be shown on their charts and this was now being done.

He thought that according to what was published in Great Britain, British charts would also shortly contain this information.

He emphasised the necessity of taking steps at once in order to avoid finding oneself confronted by a whole series of different signs used in various countries to indicate the same object. He thought, therefore, that it was

essential for the present Conference to decide this question at once, without awaiting fresh developments.

The Hydrographic Bureau had recognised that the letters proposed by Germany seemed to be very judiciously chosen and he insisted upon the advisability of coming to an immediate decision and thus prevent a regrettable confusion in the symbols. With this in view he recommended the adoption of Germany's proposal

COMMANDER BRIVONESI (League of Nations) (translation), while recognising the utility of the German proposal concerning letters, submitted a symbol which appeared to him more convenient. Instead of a circle with a cross ⊕ he proposed four small arrows in the shape of a cross. This symbol had already been adopted in aeronautical charts

✢

LIEUTENANT-COMMANDER LOPES (Portugal) (translation) pointed out for the information of the Conference that the symbol suggested by Commander Brivonesi was published on page 69 of the Hydrographic Bulletin for March 1929, as being adopted for the International One Millionth Map.

COMMANDER MIURA (Japan) was in entire agreement with the Delegate of the League of Nations and supported Germany's proposal.

LIEUT.-COMMANDER LUISONI (Argentine) (translation) declared that the symbol as proposed by the Bureau on page 11 would not suit the Hydrographic Service of the Argentine, as it had already been adopted for something else.

He mentioned the symbol adopted by the London Conference of 1919 : which had been employed by a number of countries : Great Britain, the United States, France, Italy, Portugal, Brazil and others.

CAPTAIN TONTA (Dir. I. H. B.) (translation) pointed out that the symbol indicated in the proposal now under discussion had not been proposed by the Bureau, but by the 1926 Committee on Charts. He shared Commander Brivonesi's opinion as to the symbol ✢ which was not only adopted for International Aeronautical Charts but also for the International One-Millionth Map. Considering that the International Hydrographic Bureau aimed at the standardisation of symbols and that the symbol suggested by Commander Brivonesi was already international owing to its being employed both for the International Aeronautical Charts and for the International One Millionth Map, it seemed the proper thing to adopt it now.

REAR-ADMIRAL YONEMURA (Japan) thought that the 1919 symbol was only employed for telegraph charts.

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) explained that the Delegates of Japan and the Argentine were speaking of the symbol which had been adopted by the London Conference of 1919. Several countries had put it on their charts; amongst them were France, the Argentine and others. Unless he was mistaken, Great Britain had only employed it on telegraph charts.

Nearly all the nations, even those which used this sign, declared before the Committee on Charts in 1926 that it was unsatisfactory. The possibility of replacing it was then examined. As a consequence of that discussion the sign shown in the present "Proposals" made by the States Members was suggested.

On the other hand Commander Brivonesi's proposal was different, since it tended towards the adoption of a symbol which was already used by two large groups of international charts, Aeronautical Charts and the One Millionth Map.

The question was quite new and personally he thought it to the interest of everyone to adopt the same sign for all international charts.

The Vice-President (translation) said that the international symbol appeared most desirable to him. If, however, certain nations had already used the 1926 symbol, he thought that the conflicting points of view might be conciliated by the adoption of a symbol having the circle in the middle traversed by four lines in the shape of a cross and terminated by arrow heads.



Commander Brivonesi (League of Nations) (translation) accepted M. Fichot's compromise.

Rear-Admiral Yonemura (Japan) stated that his country at present used the circle to which was added a legend in Japanese characters showing the character of the station.

The Vice-President (translation) thought that the character of the station should be shown by the letters proposed by Germany. This appeared to him a very excellent symbol.

Commander Bjorset (Norway) would accept M. Fichot's proposal. Norway had already employed the symbol of the circle with the cross and all that was needed to complete it was to add the four small arrowheads. It seemed to him that this new symbol  would meet with the approval of the German Delegation.

The Secretary General thought that if this symbol  was adopted it would indicate with sufficient accuracy and clearness that it meant radiotelegraphic stations as this symbol was wholly different from all other symbols already used on charts. It seemed, therefore, superfluous to add the letter R to this symbol. It was sufficient to add the letters G, C, or D in order to distinguish each kind of station.

The President asked Captain Claussen whether he accepted the symbol suggested.

Captain Claussen (Germany) (translation) feared that on charts of a small scale this symbol would not easily be distinguishable. That was the reason which determined him to insist on keeping the letter R after the new symbol.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) observed that in the table published in the Hydrographic Review, Vol. V,

N° 2, the letter R was always placed above the symbol on the International Aeronautical Charts. For radiogoniometric stations the letter G was added to the symbol ; for radiotelephonic and telegraphic stations the letter T ; for the meteorological stations the letter M.

It would perhaps be necessary to keep closely to this convention.

COMMANDER PARKER (U.S.A.) observed that the United States were unable to adopt the symbol selected in 1919. Wireless stations were shown on American charts by a circle having a dot in the middle and accompanied by a complete or abbreviated legend stating the character of the station.

On the American aeronautical charts a symbol approved by the Board of Surveys and Charts was used and this consisted of a circle followed by the letters D. R. Bn. to indicate a directional radio beacon.

The Delegate of the United States recognised the desirability of adopting the symbol suggested by Commander Brivonesi without, however, the letter R, which appeared to him superfluous. If this sign were adopted he would endeavour to obtain the approval of the American Board of Surveys and Charts.

CAPTAIN EDGELL (Great Britain) did not object to the new sign proposed, but desired that it should always be followed by the letter R in addition to the letter signifying the type of W/T station, since otherwise it might lead to confusion, more particularly as the letter G was frequently inserted on British charts to indicate green lights and buoys, and the letter M to indicate the distance in miles of the visibility of the lights or to show mudbanks. The addition of the letter R would prevent confusion.

THE VICE-PRESIDENT (translation) thought that the main point was that which had been raised by the German Delegation and proposed that the letters suggested by that Delegation should be adopted. It was most important for a mariner to be quite certain where he could put his ship; everything else was secondary. It was therefore essential to decide in favour of the addition of the letter R in addition to the letter signifying the type of W/T station.

COMMANDER PARKER (U.S.A.) withdrew his objection to the addition of the letter R.

THE PRESIDENT proposed that first of all the question of the symbol properly so called should be decided. It would appear that the two signs to be retained were those which had been last proposed and it was necessary to decide in favour of one of them.

REAR-ADMIRAL HERRERO (Spain) (translation) was in favour of the symbol without the circle.

COMMANDER KURZE (Germany) on the contrary preferred the circle with the arrows  as the German charts already had a circle.

THE PRESIDENT stated that this was the case also in the American charts.

CAPTAIN LUYMES (Netherlands) preferred the symbol without the circle. In his opinion the question of correcting existing charts was far less important than that of adopting symbols which were already in accordance with international charts.

Commander Parker (U.S.A.) said that he thought too much stress was laid on the possibility of converting existing symbols to new symbols by slight alteration on the printing plate. He thought that it would be easy to delete the existing symbol and replace it by another. He was therefore of opinion that the symbol without the circle should be adopted.

The President put the adoption of the symbol without the circle to the vote.

He asked that only heads of Delegations should vote.

(*This symbol was adopted by 11 votes to 6*).

The President asked the Delegates to decide whether the letter R should be added to the symbol which had just been adopted.

(*The addition of the letter R was adopted*).

The President then proceeded to put to the vote the adoption of the three letters G, C and D, following the proposal made by the German Delegation, it being understood that other letters could be added as need arose.

Commander Parker suggested that it should be made clear that those countries which would prefer to put whole words instead of the abbreviations G, C and D would be at liberty to do so.

Captain Claussen (Germany) (translation) would accept this amendment.

The President put the proposal thus amended to the vote.

(*The proposal thus amended was adopted*).

## 5. Symbols and Conventions for Wrecks.

The President opened the discussion by recalling that the Conference was asked to deal with proposals made by the 1926 Charts Committee, which should be now either adopted or rejected.

He added that the United States Delegates were tied by the decisions of their Board of Surveys and Charts, which had adopted symbols different from those which were now suggested.

Captain Claussen (Germany) considered that it was unnecessary to establish such a difference between the wrecks under letters *b*) and *c*). He would in consequence propose the adoption of the following text :

*b*) Sunken wrecks which are dangerous to surface navigation shall be shown thus



*c*) Sunken wrecks which are not dangerous to surface navigation or the depth of which exceeds 15 metres or 8 fathoms shall be shown thus :



CAPTAIN EDGELL (Great Britain) thought that there was a certain incompatibility between paragraph 4 and paragraph 7. Consequently he proposed that the following phrase should be deleted in paragraph 4 : " Except when they are dangerous to navigation. "

COMMANDER RASIKOTSIKAS (Greece) (translation) approved the proposal of the 1926 Committee on Charts with the suppression of paragraph *d*). The symbol given in that paragraph might be confused with danger points shown by the dotted line which had already been selected by the 1926 Conference for danger zones. This, moreover, was probably the reason why the Netherlands proposed to adopt the same symbol for the wrecks given under *c*) and *d*). A further difficulty, however, might occur, since the symbol shown under *c*) was provided for wrecks lying at a depth of over 15 metres. It might therefore be essential to choose a different sign.

CAPTAIN LUYMES (Netherlands) thought it advisable to explain the observations made by the Netherlands which were printed on page 15 of the Proposals.

With regard to the first observation the Netherlands saw no reason for making a difference between *c*) and *d*); both should be shown by the symbol *c*).

The Directing Committee was of opinion that the symbol " foul " should not be considered as applicable solely to the remains of a wreck. As a result, therefore, the word " foul " might be read as applying to certain zones and not to a fixed point. In that case it would be sufficient to give exact details in Notices to Mariners and it would not be necessary to show them on the charts.

With respect to the second observation of the Netherlands, Captain Luymes was under the impression that it appeared from Notice to Mariners N° 344 issued in 1919 that Great Britain had already suppressed this indication on the large scale charts. He would like precise information on this point from the British Delegate.

With regard to the third observation of the Netherlands, Captain Luymes admitted that at the time of submitting this remark he had not understood that such progress in the way of unification in the use of abbreviations had already been made. He therefore withdrew observation N° 3.

In conclusion he begged the Directing Committee to make every effort to obtain greater unification of abbreviations on charts, more particularly with respect to the different kinds of lights and fog signals.

CAPTAIN EDGELL (Great Britain), replying to the question put by Captain Luymes, declared that as a matter of fact the dates of wrecks were no longer mentioned on British charts. As it had been principally the British Delegation which had insisted upon the mention of these dates he wished to say that the British Delegation now withdrew its proposal, because since the last Conference a complete list with a tabulated index had been drawn up in Great Britain making reference easy and rendering useless all further mention of these dates on the charts.

COMMANDER ETCHART (Argentine) (translation) believed with Captain

Luymes that sufficient reason no longer existed for maintaining two different symbols for the wrecks referred to under *c*) and *d*).

Commander Parker (U.S.A.) was of opinion that one rarely knew the exact depth of a wreck and stated that a symbol was used on the United States charts which resembled that proposal under *c*) very closely. If this symbol was now adopted internationally to indicate wrecks which were not dangerous to surface navigation the result might be to cause confusion.

The President assumed that he could conclude nobody was opposed to the adoption of paragraph *a*). He therefore put to the vote the Committee's proposals up to and exclusive of *b*).

1. Wrecks which lie in positions where the depth of water exceeds 200 metres (110 fathoms) will not be shown on the charts.

2. In positions where the depth of water does not exceed 200 metres (110 fathoms) wrecks will be classified and charted as follows : —

*a*) Wrecks showing any portion of the hull or superstructure above low water will be shown on all appropriate charts by the following symbol without the world " Wreck " or the date :



(*These proposals were adopted*).

(*Proposal* b) *was moved and adopted*).

*b*) Sunken wrecks which are dangerous to surface navigation will be shown thus :



Commander Miura (Japan) observed with regard to proposal *c*) that when this symbol, which was already used in Japan, was adopted in London, the limiting depth was fixed at 18 metres or 10 fathoms and not at 15 metres. The Japanese Delegation requested that the limit adopted in London should not be changed.

Commander Etchart (Argentine) (translation) seconded this motion.

Rear-Admiral Yonemura (Japan) thought it very curious that at a time when the draught of vessels was tending to increase it should be proposed to reduce the depth at which wrecks are considered dangerous for navigation.

Captain Claussen (Germany) pointed out that the German proposal specified " Sunken wrecks which are not dangerous to surface navigation or the depth of which exceeds 15 metres " because certain wrecks of which the depth did not exceed fifteen metres were not dangerous to navigation.

The Secretary General considered that the text proposed by the German Delegation should be as follows :

*c*) Sunken wrecks which are not dangerous to surface navigation or the depth over which exceeds 15 metres will be shown thus :

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) seconded the proposal of the German Delegation.

THE PRESIDENT thought that before putting this proposal to the vote it would be advisable to decide upon the question raised by the Japanese Delegate and seconded by the Argentine Delegate, which tended to replace the figures 15 metres and 8 fathoms by the figures 18 metres and 10 fathoms.

REAR-ADMIRAL YONEMURA (Japan) pointed out that this was not a new proposal as the figures 18 metres or 10 fathoms had already been adopted by the London Conference. All he suggested was to keep to these figures.

THE PRESIDENT put the figures adopted by the London Conference to the vote.

(*These figures were adopted*).

The President also put to the vote the new drafting for paragraph *c*) as suggested above by the Secretary General.

(*This new drafting was adopted*).

THE PRESIDENT put the proposal of the Netherlands respecting the suppression of paragraph *d*) to the vote.

(*This proposal was adopted*).

(*Paragraph 3, page 14 of the Proposals, was put to the vote but not adopted*).

THE PRESIDENT pointed out that in order to prevent contradiction between paragraphs 4 and 7 of the Proposals the following words " except when they are dangerous to navigation ", at the end of the first sentence of paragraph 4 should be deleted.

> 4. On smaller scale charts, wrecks will not invariably be shown in the waters covered by larger scale charts, (*except when they are dangerous to navigation*). When necessary, a note to this effect will be inserted on the chart.

(*Paragraph 4 thus amended was adopted*).

(*Paragraph 5 was put to the vote and adopted*).

> 5. Doubtful wrecks will be marked on large scale charts with the notes " E. D. ", " P. D. ", or " P. A. ", which signify : " Existence Doubtful ", " Position Doubtful " or " Position Approximate " as necessary, in order to differentiate them from wrecks the particulars of which are authentically known.

COMMANDER RASIKOTSIKAS (Greece) (translation) pointed out that the final phrase in paragraph 6, " whilst in the case of 2 (d) it is the centre of the dotted circle ", should be deleted in accordance with a decision already taken.

6. The position of the centre of the wreck will be indicated in the case of 2 *a*) by a small circle on the waterline at the base of the mast ; in the cases of 2 *b*) and *c*) by the intersection of the horizontal line and the middle vertical line.

(*Paragraph 6 thus amended was adopted*).

(*Paragraph 7 was put to the vote and adopted*).

7. Dangerous wrecks should be shown on all appropriate charts taking due account of the scale. It is evident that such wrecks cannot be shown on very small scale charts.

(The meeting rose at 12.30 p.m.).

# 4th PLENARY SESSION.

(12th April, 1929).

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The meeting opened at 9.30 a.m. with the President, Rear-Admiral W.S. Crosley (U.S.A.) in the Chair.

## *ADOPTION OF THE MINUTES OF THE LAST MEETING.*

*(The Minutes of the Third Plenary Session were approved).*

## *COMMUNICATIONS BY THE PRESIDENT.*

Meeting of the Finance Committee.

The President announced that the Finance Committee would meet at the Offices of the I.H.B., at 2.30 p.m.

Exhibition of Instruments.

The President informed the Conference that the exhibitors who had put their instruments on view in the premises near to the Casino would be at the disposal of the Delegates at 1.30 p.m. in order to explain the apparatus.

In these circumstances the Committee on Charts would not commence its proceedings until after the Delegates' visit to the exhibition.

Lecture on Echo-Sounding.

The President reminded the Conference that this lecture would take place in the Conference Hall at 6 p.m. It would be given by Captain Claussen in the place of Dr. Maurer.

The President, replying to a question of Captain Hooykaas (Netherlands), stated that this lecture would be given in French and that it would not be interpreted. An English translation would, however, be published in the Report of the Proceedings.

Change in the Agenda of the Committees.

The President informed the Conference that item N° 29a, "Notation for distinguishing the Characteristics of Lights", which had originally been submitted to the Committee on Documents, would be transferred to the Committee on Charts.

## 7. Depth Contours and Danger Line.

The Président opened the discussion of the proposal put forward by the Delegate of Norway.

Lieutenant-Commander Luisoni (Argentine) (translation) stated that the Argentine Hydrographic Department was accustomed to show depths in fathoms on its charts. He was of opinion that any change in the unit of measure now in use would occasion serious inconvenience.

The Argentine Delegation did not in principle accept the proposal for using the metre as the unit of measure in soundings. His Delegation consequently would not accept the proposals submitted, with the exception of that referring to the use of the hundred fathom line since it was important from the geological point of view.

As far as the danger line was concerned, the Argentine Department did not consider its adoption advisable, especially as sufficient annotations and symbols were used to indicate the presence of danger in any special case.

The dotted line proposed had the disadvantage of being liable to be confused with isobaths. He was of opinion that every effort ought to be made to prevent the possibility of mistakes.

Commander Bjorset (Norway) declared that from the experience he had acquired through attending the Conferences of 1919 and 1926 he had come to the conclusion that to obtain perfect uniformity on this matter was practically impossible as one met with too many difficulties. He thought, all the same, that a discussion on the subject would yield useful results and that there would be a chance of attaining a certain uniformity.

The difficulties arose from the fact that all countries had very different coasts and also employed different units of measure — some of them counted in metres, others in fathoms or feet. In the proposal which he would put forward this difference of unit would not be an impediment. He would propose to indicate depth contour lines thus :

| | | | |
|---|---|---|---|
| ..... | or | —— · | 10 units. |
| | | —— ·· | 20 » |
| | | —— ··· | 30 » |
| | | —— ···· | 40 » |
| | | —— ····· | 50 » |

A line followed by one dot would be 10 fathoms on American and British charts and 10 metres on French charts. A mariner on the bridge would always take care to find out the unit employed by the chart before consulting it, so that it would be easy for him to read it.

To employ the same system above 50 units would probably be more difficult though not impossible. To adopt this system would not entail any great sacrifices on the part of countries. Several had already adopted this system but it would be most important to adopt it officially.

Commander Björset did not consider his proposal to be novel ; the main thing was to limit one's aims to ends which could be attained.

The Secretary General, though he considered Commander Björset's proposal to be very logical and satisfactory up to a certain point, did not altogether approve of it. He would accept the adoption of the proposal as far as either fathoms or metres were concerned but not for depths in feet also, as it was likely to entail great confusion, especially on British charts.

COMMANDER BJORSET (Norway) was confident that he had seen charts on which this system of line of equal depth was also employed for depths in feet. He was, however, not able to remember whether they were British or American charts.

He would be willing to limit his proposal to the indication of depths in fathoms and metres only, and he was certain that the adoption of this proposal would be useful to navigators.

COMMANDER ETCHART (Argentine) (translation) did not consider that there was any difficulty in providing also for the depth in feet, as this unit for soundings was employed on charts. It was easy to read these lines without any risk of confusion.

CAPTAIN LUYMES (Netherlands) stated that he was decidedly opposed to the adoption of one and the same line to indicate a depth of 10 fathoms or a depth of 10 metres according to the units of charts. All mariners did not always bother to find out the unit of measure employed on the charts for soundings and he could recollect the case of a steamer lately wrecked off the Danish coast because the navigator in charge had thought that the depth was indicated in fathoms instead of in metres. In his country the transfer was being made from the fathom unit to the metre unit and this was occasioning considerable difficulties. He saw no objection to using the same line to indicate, for instance, a depth of ten fathoms or twenty metres but he would not like to have the same line used to indicate 10 fathoms or 10 metres according to the unit of the chart.

CAPTAIN EDGELL (Great Britain) did not think that there were any British charts in which this system of contour lines could indicate either or both feet and fathoms.

He stated that he agreed with the Secretary General in saying the suggested system was likely to cause confusion in reading charts with regard to those countries which sometimes used the fathom and sometimes the foot as unit of depth. He admitted, with Captain Luymes, that mariners did not always ascertain the unit of measure used for depths. He reminded the Conference that Russia had for several years shown depths on her charts in both fathoms and feet.

THE VICE-PRESIDENT (translation) speaking on behalf of the French Delegation, said that he was glad to associate himself with Commander Björset's proposal although it was not perfect. So long, however, as uniformity in the unit of measure did not exist — and they were still far from attaining such uniformity — no solution giving complete satisfaction would be arrived at.

He agreed with Captain Luymes that one of the main objections to the proposal for unification put forward by Commander Björset was that navigators did not always ascertain what unit of measure was used on their charts. One must not, however, deduce from this fact that the same meaning should be adopted for a line representing ten fathoms or twenty metres since the mariners of a nation which used the metre would not willingly accept that the line shown should be considered as representing a multiple or submultiple of their own unit.

It was therefore necessary to keep to Commander Björset's proposal with the reserve that, owing to the complication of the coasts and the routine observed in methods, these changes would not be immediately effected.

The French Delegation was therefore willing to accept Commander Björset's proposal, which in the present state of things seemed to be the most logical and the most likely to conciliate the interests concerned.

The Secretary General informed the Conference that Rear-Admiral Herrero (Spain) suggested the addition of a line consisting of small pecks without intermediate dots for the 5 unit contour line. He also suggested that lines of 10 to 50 units should be drawn in *thin* pecks and that the same lines drawn in *thick* pecks should indicate ten times those depths.

Commander Rasikotsikas (Greece) (translation) proposed that characteristic lines should only be adopted for depths of 1 to 20 metres or 1 to 10 fathoms and that all greater depths should be shown by lines of the same type supplemented by figures showing the depth. In this manner all confusion would be avoided.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) reminded the Conference that in 1926 the proposal to employ the system of figures indicating the depths was rejected in the Committee on Charts by a majority which he remembered had been quite substantial.

Captain Claussen (Germany) stated that Germany had adopted a system for depths of 1 to 10 metres which could not be changed, but he was able to accept the proposals relative to depths greater than 10 metres.

Captain Romagna-Manoia (Italy) (translation) considered that the Conference was giving too much time to the study of this question. Any mariners who made use of a chart must first find out what was the unit of measure in which the depths were indicated.

H. E. Napier Tomlin Pasha (Egypt) asked those countries that made use of the foot as well as the fathom as a unit of measure whether it would be possible to mark in red ink the figures indicating depths in feet.

Captain Edgell (Great Britain) replied that it would double the cost of printing.

The more he studied the proposal to adopt one and the same line for depths in metres and depths in fathoms, the more difficult it seemed to him to find a proper solution.

He pointed out that countries which employed fathoms and feet as units had reached a more or less uniform system. Instead of trying to find a solution common to countries which made use of metres and those which made use of fathoms and feet, it would at present perhaps be better for the countries which employed the metre to endeavour between themselves to standardise their methods.

Commander Parker (U.S.A.) stated in reply to H. E. Napier Tomlin Pasha (Egypt) that the United States no longer employed the foot and the fathom on the same chart, though a few of the old charts still have this system.

He pointed out that the countries which use the fathom had adopted a system which was almost identical for all those countries and which was used on thousands of charts. It would be an extremely costly procedure to effect a change. He thought that it would be preferable, as Captain Edgell had suggested, for those countries which use the fathom to continue their present system, while those countries which used the metre should endeavour to reach a uniform system.

THE PRESIDENT stated that the Plenary Session had given a great deal of time to a subject which might have been disposed of more rapidly by two or three hydrographers, and put to the vote Captain Edgell's proposal which was supported by Commander Parker.

(*The proposal was adopted*).

REAR-ADMIRAL YONEMURA (Japan) placed at the disposal of the members of the Conference a chart which had been prepared by the Japanese Department in accordance with the system proposed by the I. H. B. He was in favour of adopting the system suggested by the I. H. B. with a slight change consisting in shortening the pecks used for the 100 metre and 1000 metre lines and for the lines indicating zone limits.

CAPTAIN LUYMES (Netherlands) pointed out that the discussion had borne on the new proposal made by the Norwegian Delegation rather than on the one made by the I. H. B. He did not think that this question could be solved in so little time.

It had already been amply discussed by the London Conference and the 1926 Conference. There were still some differences of opinion between the Delegations. Captain Luymes would therefore propose to refer the question to the I. H. B. for a further examination in view of the coming Conference of 1931.

THE PRESIDENT understood (the Netherlands Delegate being of the same opinion) that this proposal applied solely to depth contour lines which would be used on charts in metres. There was, therefore, no need to come back to the decision taken for charts whose unit of sounding was the fathom or the foot.

COMMANDER RASIKOTSIKAS (Greece) (translation) thought sight should not be lost of the end to be attained, that is to say, to simplify and reduce the various symbols shown on charts in order that mariners could employ them safely.

He proposed that for lines which are important to mariners (i. e. the 5 metre and 3 fathom line and the 10 metre and 6 fathom line) symbols should now be adopted which would be visible at first glance. The 5 metre line adopted at the Hydrographic Conference of 1919 was similar to the 3 fathom line.

It only remained now to adopt one more line which should indicate on the chart in metres a 10 metre line similar to that which now marked the depth of 6 fathoms on the chart in fathoms.

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) thought that the Conference might already make an important

advance by fixing the 10, 20, 30, 40 and 50 metre lines in accordance with Commander Björset's suggestion.

If an agreement were reached on this point the I.H.B. could then study a more complete system to be laid before the Conference in 1931. In the absence of any guiding principle, however, it would be difficult for the Directing Committee to prepare a system which would have any chance of being accepted and the discussion would begin afresh in 1931. Moreover, no very serious objection had been made to Commander Björset's proposal.

Captain Romagna-Manoia (Italy) (translation) said that the approval of Commander Björset's proposal with respect to depths in metres would mark a great step forward and one would thus approximate more nearly to the lines which were already used for the same unit numbers on the British and American charts showing soundings in fathoms.

Captain Luymes (Netherlands) was, on the contrary, against any decision being made for the time being. In his opinion the adoption of a certain number of lines would at once have the effect of tying the hands of the Directing Committee and would make their task of studying a complete system more difficult. It would be better to refer the whole question to the Directing Committee for study and submission to the next Conference.

Commodore Reinius (Sweden) accepted Commander Björset's proposal with the amendment that countries with a complicated coast line should be authorised to use a simple dotted line for the 10 metre line.

He believed that the adoption of lines to show 10, 20, 30, 40 or 50 metres would provide a basis for examination by the Directing Committee with a view to preparing a more complete system.

Commander Rasikotsikas (Greece) (translation) supported the proposal made by the Netherlands Delegate to postpone the matter. It was not advisable to make a final decision to-day ; the acceptance of the proposed line would be contrary to the aim contemplated, namely uniformity. The immediate necessity was to adopt lines which could be read easily on the charts.

Commander Bjorset (Norway) insisted upon the immediate acceptance of his proposal since this would constitute substantial progress towards the standardisation of the lines. Moreover, he did not think that the adoption of these lines would in any way embarrass the Directing Committee in drafting more complete proposals to be submitted to the next Conference.

Captain Claussen (Germany) supported Commodore Reinius' suggestion. He proposed the immediate adoption of the lines for 20 to 50 metres, while leaving each country free to choose the lines it considered advisable for 10 metres and under.

The President reminded the Conference that the Hydrographers of the countries using the metre had been invited to meet unofficially outside the sittings of the Conference with a view to reaching an agreement and drafting a proposal to be submitted to the session to-morrow morning.

(*This solution was adopted*).

## 9. Indication of Channels dredged to a certain Depth.

THE PRESIDENT emphasised the fact that this proposal emanated from the 1926 Committee.

COMMODORE REINIUS (Sweden), CAPTAIN CLAUSSEN (Germany) and COMMANDER BJORSET (Norway) moved the adoption of this proposal.

CAPTAIN EDGELL (Great Britain) was in favour of the proposal subject to two amendments. The first change consisted in including the date of the dredging on the chart itself and not only in the Sailing Directions.

The second change was with reference to the method employed.

THE PRESIDENT pointed out that the English text did not correspond exactly to the French text which was correct.

H. E. NAPIER TOMLIN PASHA (Egypt) seconded Captain Edgell's amendment.

(*Adopted*).

COMMANDER ETCHART (Argentine) (translation), in view of the fact that dredging is being continually carried out in the Argentine, more particularly in the River Plate, wished to know what date should be mentioned.

THE PRESIDENT replied that in that case the mention would be as follows :

" The channels are dredged *continually* — or *annually* " instead of stating the date.

THE VICE-PRESIDENT (translation) suggested that in that special case it should be said that the channels were maintained at such and such a depth.

THE PRESIDENT, in reply to a question by COMMANDER MIURA (Japan) with reference to the exact meaning of the term " method of dredging ", stated that the proposal was as follows in the French text :

> " Que les chenaux qui ont été dragués jusqu'à une certaine profondeur donnée soient expressément indiqués comme tels toutes les fois que le permet l'échelle de la carte, avec mention de la profondeur. "

The words " mention of the method of dredging " (mode de dragage) were deleted.

REAR-ADMIRAL YONEMURA (Japan) explained that there was one Japanese word meaning " to dredge " and another meaning " to explore " or " to sweep ". It was therefore useless to give a special explanation, since each of these Japanese words had its exact meaning.

(*The proposal was adopted as amended*).

## 10. Colouring of Light Sectors.

THE PRESIDENT reminded the Conference that this proposal also emanated from the 1926 Committee.

LIEUTENANT-COMMANDER LUISONI (Argentine) (translation) foresaw

considerable difficulties in printing. On these grounds he was unable to adhere to the proposal before the Conference, especially as its adoption would entail a second printing in colour.

The President drew attention to the fact that proposal N° 10 began with the words : " It is desirable that... " and it appeared to him that this should give satisfaction to the Argentine Delegation.

He added that in the United States certain lights were changed continually, specially in the small harbours. For this reason it would be materially impossible to attempt the general application of proposal 10 in its entirety.

The Secretary General stated that this question had been brought up at the London Conference and that he had had an opportunity of discussing Proposal 10 with three British Hydrographers. They had all admitted that the adoption of this system was desirable but that it would be impossible for the British Service to apply it. This was the reason why the 1919 and 1926 Conferences had prefixed the proposal with the words: "It is desirable that..." Hence this decision would not be compulsory.

(*Proposal 10 was approved*).

## 11. Reference to Adjoining Charts.

(*Approved without discussion*).

## 12. Standardisation of Title of Charts.

The President stated that, in view of the great length of this proposal, he suggested that its examination should be postponed to another meeting.

(*Agreed*).

## 13. Standardisation of Dating of Charts.

The President drew attention to the fact that the proposal would be found in quotations on page 26 of the " Proposals ".

Captain Luymes (Netherlands) emphasised the importance of always being able to find the dates in the same part of a chart. Such dates are above all useful to navigating officers using charts compiled in a language other than their own.

The President, with a view to the discussion being carried on in its proper sequence, proposed that the Conference should first give its views on the draft submitted by the 1926 Committee and subsequently on the question raised by Captain Luymes.

Captain Claussen (Germany) approved this suggestion.

The Vice-President (translation) pointed out the various difficulties which the French Hydrographic Service would encounter if this proposal were adopted.

The French Hydrographic Service was able to guarantee the dates on which charts were corrected until such time as they were despatched to the agents to hold in stock for sale. The French Hydrographic Service could not, however, counsel agents to correct the charts. They had paid money for them and regarded them only as objects for sale. The adoption of proposal N° 13 would entail a complete change in the method of sale of French charts. It would mean putting the whole sale in the hands of the central Hydrographic Service, which would not be convenient. It was therefore impossible for the French Hydrographic Service to accept this proposal since no change could be made in the method of sale.

THE PRESIDENT thought he would relieve M. Fichot's fears by pointing out that the charts for sale should bear a date at the time of sale, this date being that of the time of the last corrections made by the agent himself.

All the other Hydrographic Services had the same difficulties as the French Service ; they had no means of compelling agents to make on the charts the corrections which they sent them.

COMMANDER BJORSET (Norway) thought that the proposal of the 1926 Charts Committee was admissible. In any case the charts had been corrected up to the first day of each month, since the Notices to Mariners were generally published on that date.

With regard to the charts kept in stock by the Hydrographic Department, these could always be kept up to date until the date of their issue.

In Norway all necessary information was invariably sent to the agents to allow them to keep up to date the charts they had in stock.

THE VICE-PRESIDENT (translation) said that unhappily the agents did not do this.

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) said that the Conference could not now open a discussion on the highly complicated question as to the manner in which the charts should be kept up to date. The Committee had merely requested that charts should contain a note mentioning the date of the latest small correction made in order that seamen should have accurate information on that point.

THE PRESIDENT asked if anybody desired to second Captain Luymes' motion, inviting the Conference to state in what part of the charts the mention of the date of the latest correction should be inserted.

COMMODORE REINIUS (Sweden) was of opinion that it should be left to the discretion of the Hydrographic Offices to decide where that date should be inserted. He was therefore unable to support Captain Luymes' proposal.

THE PRESIDENT pointed out that no two charts were exactly alike and that it would be impossible, for instance, for the present Conference to advise the United States Hydrographic Service where it should affix the information suggested.

THE PRESIDENT proceeded to put to the vote the three paragraphs of the proposal made by the 1926 Committee.

(*This proposal was adopted*).

## 14. Dimensions of Charts.

The President put to the vote the proposal made by the Committee of 1926.

(*Adopted without any objections*).

## 17. Special indication of new parts of exchange copies of corrected Charts.

The President announced that it would not be possible to apply on United States charts the light blue wash suggested, as this same blue wash had been lately employed to indicate certain depths. The United States would most probably adopt a light red wash instead.

Commodore Reinius (Sweden) suggested that the corrected part be surrounded by a coloured line as was done in his country.

Captain Edgell (Great Britain) proposed to modify thus the text suggested by the Committee :

> " that the new part on exchange copies of corrected charts should be specially indicated by a light colour wash or limited by a coloured line. "

Commander Parker (U.S.A.) declared that it was customary in the United States to indicate new parts of corrected charts by edging them with a blue line. This method was quicker and avoided the distortion of the paper used for the charts.

The President suggested the following text :

> " that the new part on exchange copies of corrected charts should be specially indicated by a light coloured wash or encircled by a line of colour. "

(*This text was adopted*).

## 18. Information concerning Dangers marked P.D. and E.D.

The President, considering that proposal N° 18 entailed a certain obligation on the International Bureau only and not on national Offices, suggested that it should be voted upon at once.

(*The proposal was adopted*).

## 20. Insertion of the date of the latest correction of the Chart in Catalogues published by National Hydrographic Offices.

The President announced that it was the wish of the I.H.B. to reject this proposal, which had no particular interest. Personally, the

President shared this opinion. He saw no object in adopting this proposal, which would entail considerable expense.

CAPTAIN EDGELL (Great Britain) seconded the objection made by the President.

(*Proposal N° 20 was not adopted*).

## *COMMUNICATIONS.*

THE PRESIDENT announced that in order to give the Delegates an opportunity of studying the instruments exhibited, the afternoon meeting of the Committee on Charts would commence at 3 p.m.

The next Plenary Session would be held next Monday at 9.30 a.m.

(The meeting adjourned at 12.30 p.m.).

# 5th PLENARY SESSION.

(15th April, 1929).

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The Meeting opened at 9.30 a.m., with the President, Rear-Admiral W.S. Crosley (U.S.A.) in the Chair.

## *ADOPTION OF THE MINUTES OF THE LAST MEETING*

(*The Minutes of the Fourth Plenary Session were adopted*).

## *COMMUNICATIONS FROM THE PRESIDENT*

Departure of Ing. Hydrographe General Fichot, Vice-President.

The President regretted to announce to the Conference that M. Fichot had been officially recalled to Paris and had left Monaco yesterday afternoon. He had asked the President to express his regrets at having to leave the Conference and to thank the Delegates for the honour they had done him in electing him as their Vice-President.

Introduction of a new Delegate.

The President introduced to the Delegates Mr. Albert Roper, Secretary General to the International Commission for Air Navigation.

Convocation of the Finance Committee.

The President announced that the said Committee would meet to-day at 2.30 p.m. at the offices of the I. H. B.

Exhibition of Instruments.

The President suggested to the members of the Committee on Documents that, during the meeting of the Committee on Charts, they should visit the exhibition of instruments which was being held near the Casino.

Composition of the Committee on Documents.

The President informed the Conference that owing to a clerical error the name of Captain Luymes (Netherlands) had appeared on the lists of members of both the Committee on Documents and the Committee on Work. A correction should be made to the effect that Captain Hooykaas (Netherlands) would replace Captain Luymes on the Committee on Documents.

At the President's suggestion the Conference resumed the discussion of the Agenda.

## 7. Depth Contours and Danger Line.

THE PRESIDENT reminded the Conference that it had been moved and seconded at the beginning of the discussion of this question that certain lines and dots be temporarily accepted by this Conference and referred to the I. H. B. as a basis upon which to formulate definite lines and dots :

| | |
|---|---|
| —— · | 10 metres |
| —— ·· | 20 » |
| —— ··· | 30 » |
| —— ···· | 40 » |
| —— ····· | 50 » |

COMMANDER RASIKOTSIKAS (Greece) (translation) proposed that the symbol for 10 metres should be changed so as to ressemble the 6 fathom line on the British and American charts, the 10 metre line being shown by means of dashes instead of dots.

10 metres — — — — — — — — — —

CAPTAIN CLAUSSEN (Germany) suggested that a 10 metre line should not be adopted. The symbol suggested differed greatly from that employed on German charts to indicate a depth of ten metres.

THE PRESIDENT observed that any decisions which might be made on this subject would not be regarded as obligatory to the countries represented at the Conference. He suggested that proposals of the kind just made should be presented directly to the I. H. B., who would give the question further examination during the two and a half years which preceded the next Conference.

Should the proposal just moved be adopted, it would only be in the character of an indication given to the I.H.B. as a basis for its examination.

COMMODORE REINIUS (Sweden) informed the Conference that the Committee on Charts had, during one of its last meetings, examined the question of contour lines and had appointed a small Sub-Committee with the object of going further into this question. Discussion on this subject would be resumed this afternoon after the ordinary meeting of the Committee on Charts.

In consequence, Commodore Reinius thought that it would be better for the Plenary Meeting to postpone discussion on this question till the Sub-Committee on Charts had reached some conclusions on the subject.

THE PRESIDENT feared that too much time was being devoted to this question. The discussion of the point had already lasted two hours and if the decision were merely that it should be referred for examination to the I. H. B. it was perhaps superfluous to continue the debate.

COMMANDER BJORSET (Norway) thought that the greatest difficulties in the way of an agreement related to the 10 metre line of equal depth. There did not appear on the other hand to be serious opposition with regard to the 20, 30, 40 and 50 metre lines.

In order to facilitate a solution, therefore, he thought that the 10 metre line of equal depth might be shown by means of a dotted line to which, in order to avoid all possibility of mistake, the figure 10 could be added.

Captain Luymes (Netherlands) seconded the proposal made by Commodore Reinius (Sweden) to postpone the continuation of this discussion until the Sub-Committee which was to meet at 5 this afternoon had concluded its consideration of this matter and submitted its report.

The President put to the vote the motion proposed by Commodore Reinius and seconded by Captain Luymes for the postponement of the discussion until the Sub-Committee on Charts had submitted its report.

(*The motion was adopted*).

## 12. Standardisation of Title of Charts.

The President suggested that the proposal should be examined paragraph by paragraph. He was under the impression that perhaps it could not be adopted as a whole.

(*The Conference accepted this method of procedure*).

The President opened the discussion on Paragraph 1 :

> " The Committee on Charts recommended the following provisions :
>
> 1. That a geographical position should be given on plans and charts which are not graduated and that with regard to graduated plans and charts a simple reference as to the origin should be given."

In reply to an observation made by Captain Luymes (Netherlands), the President suggested that in the English text the words "of longitudes" should be added after the word " origin ".

(*This addition was adopted*).

Commander Rasikotsikas (Greece) (translation) pointed out that as a result of the adoption of another proposal referred to the Committee on Charts — Proposal N° 16 — the meridian and the parallel would both be indicated on the plan. Under these circumstances he thought that Proposal 12 should be deleted, since the point of intersection of the parallel and meridian would be given on the chart. It was therefore unnecessary to give on the plan a geographical position by longitude and latitude.

Rear-Admiral Herrero (Spain) (translation), referring to the remark made by Commander Rasikotsikas, thought that N° 12 and N° 16 were incompatible. He pointed out that in the one longitude and latitude were given in figures and in the other only the meridians and parallels.

(*Paragraph 1 was adopted with the amendment to the English text.*)

The President invited the Conference to discuss paragraph 2 :

" That the date of the survey should be shown on charts. "

COMMANDER BJORSET (Norway) proposed that the words "if practicable" should be added.

COMMODORE REINIUS (Sweden) and CAPTAIN CLAUSSEN (Germany) supported this motion.

*(Paragraph 2 was adopted with this amendment).*

THE PRESIDENT invited the Conference to discuss Paragraph 3 :

> "That it be left to each nation to decide whether the names of ships and officers who took part in the survey should be mentioned."

CAPTAIN LUYMES (Netherlands) proposed that it should be decided that in every case it should be mentioned whether the survey had been made by an expert or not. He remarked that it might occur that a survey had been made by naval officers who might indeed possess adequate general knowledge but who were nevertheless not hydrographic experts.

CAPTAIN EDGELL (Great Britain) supported this motion.

CAPTAIN ROMAGNA-MANOIA (Italy) (translation) submitted that the names of ships and officers should be mentioned where the survey had not been carried out by experts.

CAPTAIN LUYMES (Netherlands) observed that it would not always be found easy by the Hydrographic Service to decide whether an officer was expert or not.

COMMANDER BJORSET (Norway) did not see the use of this proposal. He considered that when a Government issued a chart it was on the understanding that it had been drawn by competent hydrographers.

THE PRESIDENT shared Commander Björset's opinion and declared that instead of putting indications it would be sufficient to write in large red characters the words : "This chart is good."

THE SECRETARY GENERAL pointed out that the following note sometimes occurred in the Notices to Mariners published by the British Hydrographic Office : "Owing to incomplete surveys this chart should be used with caution."

CAPTAIN EDGELL (Great Britain) stated that this note was added when the charts seemed, from their outward appearance, to be the result of a thorough survey, when in reality the survey had been more summary than would appear.

CAPTAIN LUYMES (Netherlands) stated that in his country each sheet bore the remark : "Surveyed by the Hydrographic Office" or "Surveyed by Captain X."

LIEUTENANT-COMMANDER LUISONI (Argentine) remarked that when a Hydrographic Office published a chart it should assume the responsibility.

COMMANDER PARKER (U.S.A.) recalled that occasionally it was desired to publish charts that were merely the results of a summary survey in the absence of complete information concerning the district in question. In such a case it should be mentioned that the chart had been compiled in accordance

with a very summary survey or that it had been made according to information obtained during a reconnaissance.

Captain Romagna-Manoia (Italy) (translation) stated that this was what he had proposed.

The President suggested to the Conference the following draft :

"Every chart should contain a mention of the nature of the survey on which it was based."

(*The voting on this proposal was equally divided*).

The President abstained from giving his casting vote.

On the proposal of the President, the *Conference voted the following text* in place of Paragraph 3 in the Proposals :

"That every chart which is not based on an accurate survey should contain a mention to the effect that it has been made from incomplete surveys or reconnaissances."

The Conference passed to the next paragraph :

"4. That when a country invariably uses the metre, it is unnecessary to mention the unit of measurement of depths."

Commodore Reinius (Sweden) was of opinion that the unit of measurement of depths should invariably be mentioned.

(*Paragraph 4 was rejected*).

Paragraph 5. "That a table of symbols need not be shown on the charts."

Lieutenant-Commander Lopes (Portugal) (translation) asked whether abbreviations as well as symbols should be understood.

The President having replied in the affirmative, Lieutenant-Commander Lopes proposed the rejection of Paragraph 5, as concerns certain abbreviations, stating as his opinion that if seamen were unable to find a table of some of the abbreviations on the chart the use of original charts would be of very little value to them.

The President thought that the inclusion of a table of symbols and abbreviations on every chart would entail a considerable amount of work.

(*Paragraph 5 was adopted with the addition of the words "and abbreviations"*).

"6. That magnetic variation should be omitted from the title when it is shown against the compass rose ;

(*Paragraph 6 was adopted without discussion*).

"7. That whenever the projection is not Mercator's projection, this should be mentioned on the chart."

Commodore Reinius (Sweden) was of opinion that the projection should always be mentioned on the chart.

Captain Luymes (Netherlands) supported this motion.

COMMANDER RASIKOTSIKAS (Greece) (translation) suggested the following draft :

" that whenever the projection is not Mercator's projection, the name of the projection should be mentioned on the chart. "

COMMANDER PARKER (U. S. A.) agreed with Captain Luymes. The proposed system would be easily understood by hydrographers but it would not be so clear to seamen.

THE PRESIDENT submitted the following draft to the Conference :

" That whenever the projection is not Mercator's projection the system of projection should be mentioned on the chart. "

(*This draft was adopted*).

" 8. That the authority, date of surveys and foreign charts used, together with their numbers when possible, should be mentioned. "

CAPTAIN EDGELL (Great Britain) pointed out that if the numbers of foreign charts were mentioned it would take up considerable room, as possibly fifty or more foreign charts might be used in compiling a chart. Perhaps this had not been intended as a reference to the numbers of the charts but only to their dates.

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) said that in 1926, according to his recollection, they had meant the numbers, but care had been taken to add " when possible. "

ING. HYDROGRAPHE EN CHEF COT (France) (translation) pointed out that the case might arise where the numbers of the charts employed had been changed. It would then be necessary to change the figures on the charts.

(*Paragraph 8 was adopted as read*).

" 9. That for nations which do not use the Latin alphabet an additional title of the chart should be printed in Roman characters. "

COMMANDER RASIKOTSIKAS (Greece) (translation) stated that in his country charts also contained a translation of the abbreviations. He thought this essential.

(*This suggestion was not seconded and Paragraph 9 was adopted as read*).

" 10. That the enumeration of conspicuous objects is desirable on large scale charts. "

COMMANDER PARKER (U.S.A.) proposed the addition of the following:

" When the symbols are not accompanied by a legend. "

When the charts contained these explanatory legends a separate list was unnecessary.

CAPTAIN EDGELL (Great Britain) supported this proposal.

(*Paragraph 10 was adopted as amended by Commander Parker*).

"11. That the variation obtained by accurate magnetic observations made at places near the coast and which may be useful to seamen, should be mentioned on the charts near such places or in the title."

Commodore Reinius (Sweden) pointed out that a large number of variations existed in the Baltic, resulting in numerous anomalies, and it was impossible to show them all on the charts.

Commander Bjorset (Norway) agreed with this remark and stated that the variations were considerable near the Lofoden Islands, Finmark and many other places and varied enormously at points only 50 metres apart.

Commander Parker (U.S.A.) said that it would be advisable for the charts to state the existence of such abnormal variations.

The Secretary General was also of that opinion and considered it was possible to state on the charts in general terms that abnormal variations existed in such places and were likely to reach a certain number of degrees.

Commander Bjorset (Norway) replied that when these variations were as numerous as in the cases referred to, it was a material impossibility to show them all on the charts. This was done on Norwegian charts whenever danger is involved. On the other hand these variations were always mentioned in the Notices to Mariners and Sailing Directions.

The President proposed that the following words should be added : "whenever practicable."

*(Paragraph 11 was adopted with the addition proposed by the President).*

## 21. Original Charts.
## Publication of a Catalogue of Original Charts.

The President pointed out that as the Hydrographic Bureau had already started to put this decision into force, there seemed to be no need to take new measures.

Captain Luymes (Netherlands) had studied with great interest the catalogue of original charts given for European Seas. He approved the idea of showing in this catalogue a special column in which should be indicated, by some appropriate signs, the nature of the survey on which the chart was based.

There seemed to him, however, to be too much difference between the categories of surveys which, according to the Proposals of the Bureau, were to be indicated by two asterisks and those to be indicated by three asterisks.

Captain Luymes would therefore suggest that this list of categories of surveys should be modified in the following manner. The indication of the one and two asterisks should remain with its present meaning. Then three asterisks should have the following meaning :

"Systematic surveys based on accurate triangulation and regular and close sounding lines, but not including dredging, sweeping

or reconnaissance from the air of the areas, in which unknown dangers for shipping may still occur."

A fourth category should follow, which should be shown by four asterisks and should give the following indication :

"Complete surveys based on accurate triangulation and close examination of the bottom, either by sounding or, if necessary, by dredging, sweeping or reconnaissance from the air, in such a manner that shipping practically can abstain from reckoning with the existence of unknown dangers."

THE PRESIDENT observed that the only obligation this system would entail for National Hydrographic Services would be to advise the International Hydrographic Bureau to which category this or that chart belonged. Under these circumstances, he did not think that the Conference could reject the text which was now submitted to it.

COMMANDER PARKER seconded Captain Luymes' observations. A great number of charts were certainly better than those indicated by two asterisks as suggested by the Bureau, yet they would not fill all the conditions required for coming under three asterisks. In consequence Commander Parker was of opinion that the division into four categories as suggested by Captain Luymes should be adopted.

THE PRESIDENT put to the vote the proposal made by the Committee and amended by Captain Luymes, namely, classification in four categories.

(*This proposal was adopted*).

## *SAILING DIRECTIONS, LISTS OF LIGHTS AND OTHER NAUTICAL BOOKS.*

### 25. Indication of Source and Date of information relative to Foreign Coasts in National Sailing Directions.

None of the Delegates having asked to be allowed to speak on this question, the PRESIDENT put the proposal of the 1926 Committee to the vote.

(*This proposal was adopted*).

### 26. Publication of an Index Chart of original Sailing Directions.

None of the Delegates having asked to be allowed to speak on this question, the PRESIDENT put the proposal of the 1926 Committee to the vote.

(*This proposal was adopted*).

## 27. Bearings to be given from seaward in the Lists of Lights.

None of the Delegates having asked to be allowed to speak on this question, the President put the proposal of the 1926 Committee to the vote.

(*This proposal was adopted*).

## 28. Tabular Method of Compilation of the Lists of Lights.

Commander Bjorset (Norway) did not think the translation of the introduction and headings of columns into English or French was essential. It would be sufficient to say that it was desirable.

Rear-Admiral Herrero (Spain) (translation) agreed with this remark.

The President thought that the English text satisfied Commander Björset's wishes.

The Secretary General held that it would then be necessary to amend the French text which would read :

> " Il est désirable que l'introduction et les en-têtes de colonnes soient traduits en anglais ou en français..., etc. "

The President put the proposal of the 1926 Committee to the vote together with the above amendment.

(*This proposal was adopted*).

## 30. Information concerning Lists of Signal Stations for insertion in the Light Lists.

Commodore Reinius (Sweden) thought that his proposal had been misunderstood by the Directing Committee. His suggestion was that two abridged lists should be added at the end of the lists of Signal Stations, one giving the List of Lights, the other the List of International Signal Stations. He withdrew proposal N° 3 " Lists of W. T. and D. F. Stations ", but maintained proposals N°s 4 and 5. This system had been applied in Sweden and seemed to give excellent results.

Captain Claussen (Germany) was prepared to approve Commodore Reinius' suggestion providing for a list of the stations situated at other geographical points which are not necessarily connected with Lights. In support of this observation he quoted the last paragraph preceding the proposal of the Bureau which read as follows :

> " In any case, such lists would be misleading if only those stations connected with Lights were inscribed, as stations at other geographical points are of equal importance. "

COMMANDER BJORSET (Norway) said that he had not full powers to adopt modifications in the Light Lists but he would ask his Government to apply the decisions made by the Conference.

In any case he thought that the Bureau's Proposal would satisfy everyone and more particularly Commodore Reinius and Captain Claussen. He reminded the Conference of the wording of this proposal :

> " In the interest of uniformity of methods, and to save unnecessary expense, it is preferable to free Light Lists from undesirable complications and only insert information which is absolutely necessary. "

COMMODORE REINIUS (Sweden) did not grasp the precise meaning of the two expressions : " undesirable complications " and " information which is absolutely necessary. " It appeared somewhat vague to him.

CAPTAIN EDGELL (Great Britain) shared Commander Björset's opinion. He feared that these supplements to lists would only result in making the Lists of Lights too bulky and unwieldy.

Concerning the supplements which could be shown in the International Code of Signals, Captain Edgell thought that it would be necessary carefully to avoid the insertion in that book, even as an appendix, of any information likely to be frequently modified. The International Code of Signals was a very accurate book and the adoption of periodic amendments would be contrary to the principles on which this code was based.

He did not object to countries adding the various lists suggested to their Lists of Lights when they wished to do so. Only when these countries had made these additions they would soon become aware that the size of their Lists of Lights had considerably increased.

COMMANDER BJORSET (Norway) said that he did not really understand the expression " undesirable complications " and " information not absolutely necessary ", but that he would trust Commodore Reinius to establish the criterion.

THE PRESIDENT thought that everyone who made use of the International Code of Signals and the Lists of Lights should agree not to make these books too bulky. Considering, however, that a great deal of information which it was suggested should be inserted in the Supplementary Lists, was now absolutely necessary to mariners, a happy solution would be to issue a new publication which should be kept up to date and should contain all this information.

It, therefore, remained for the Conference to vote on the proposal made by the 1926 Committee, from which, in accordance with Commodore Reinius' wish and the proposal of the Bureau, N° 3 should be deleted.

THE PRESIDENT in reply to a question from COMMANDER ETCHART observed that as the proposal of the Bureau had no other effect than to alter the one which is shown at the beginning of the chapter, he would put the two proposals to the vote together.

The Conference would therefore have to vote on the proposal which tended to insert, at an appropriate place, N$^{os}$ 1, 2, 4 and 5 of the list in the

Lists of Lights and at the same time on the proposal of the Bureau which modified the meaning of the proposal made by the 1926 Committee.

The President asked if anyone supported the proposal of a special publication for supplementary information.

Captain Luymes (Netherlands) thought that it was a good thing for countries like the United States or Great Britain, where material was plentiful, to issue a special publication. But there were other States which could condense this information on a single sheet of paper. It would not seem necessary in this case to issue a special publication.

The President replied that this case would be provided for if his own proposal were adopted.

In order to make the decision of the Conference clear, The President proceeded to put to the vote the beginning of N° 30 up to "Comments of the Bureau." (The proposal made by the 1926 Committee, minus N° 3).

> "that there should be included in the List of Lights, for those stations only which are associated with the lights, the following lists":
>
> 1. Lists of Lights ;
> 2. List of International Signal Stations ;
> 4. List of the Signal Stations regarding ice and Light Vessels;
> 5. List of Submarine Signal Stations.

(*This proposal was not adopted*).

The President put to the vote the proposal made by the Bureau.

> "In the interest of uniformity of methods, and to save unnecessary expense, it is preferable to free Light Lists from undesirable complications and only insert information which is absolutely necessary."

(*This proposal was adopted*).

## 32. Translation into English or French of the first Notice to Mariners of each year issued in a Language other than English or French.

Rear-Admiral Herrero (Spain) (translation) proposed the adoption of the proposal with the addition of the words: "It is desirable that" at the beginning.

Captain Claussen (Germany) thought that this was already the meaning of the English text.

Captain Luymes (Netherlands) stated that in the third paragraph of the Comments of the Bureau, beginning with the words "The Directing Committee considers" and ending with the words "in the form of General Notices", he was not quite clear as to the meaning of the expression "General Notices." He admitted that even if everyone now agreed to publish the Notices to Mariners in one or other of the more widely known languages

it was nevertheless true that the application of this principle — in his opinion quite desirable — would involve considerable expenditure.

THE SECRETARY GENERAL stated in reply that, by the words " General Notices ", the Bureau meant the notes which are published at the beginning of every number of the Notices to Mariners as, for instance, the indication of the direction in which bearings are given and other such information.

THE PRESIDENT noted that no objection had been raised to Rear-Admiral Herrero's amendment.

(*The Bureau's proposal, with the addition of the words "It is desirable that", was adopted*).

## 33. Period of previous Notice to be given before the installation or alteration of Aids to Navigation.

THE PRESIDENT pointed out that this proposal had been unanimously adopted by the 1926 Committee on Documents as proposals 34 and 35 had also been.

CAPTAIN LUYMES (Netherlands) proposed the addition of the words " at least " and " important " in three places in the next of the proposal, which would then read as follows :

> " The Committee considered that *at least* two months previous notice should be given, whenever practicable, of the installation of *important* new aids to navigation or of *important* alterations in those which exist. "

(*The proposal thus amended was adopted*).

## 34. Mention, in Notices to Mariners, of the intention to issue further notice on any subject.

(*Adopted without discussion*).

## 35. Notices of a Temporary Nature.

(*Adopted without discussion*).

## 4. Symbols for Sunken Rocks.

THE PRESIDENT invited the Delegates to turn to N° 4, page 12 of the Proposals, and to read with special care the proposal of the Bureau, which was a modification of the 1926 Committee's proposal.

> " It is agreed to adopt the symbol ⊕ for a rock of small area (pinnacle) with depths of 10 metres or less over it at Low Water.

" The symbol, alone, shall be used for a rock over which the depth is less than 2 metres at Low Water, or for a rock over which the depth is unknown, or if the scale of the chart is too small to insert the depth.

" If it is desired to insert the exact depth, this depth shall be indicated by a number placed inside the symbol, as follows :




(The numeral should be of a different printing type from that of the soundings on the chart).

Captain Edgell (Great Britain) asked whether this proposal applied also to those countries which used the foot or fathom as unit of depth. He wished to know if that would prevent these countries from showing sunken rocks by the proposed symbol accompanied by a figure showing the depth, and the letter R signifying " rock. "

Commander Bjorset (Norway) reminded the Conference that when this proposal was discussed in 1926 (page 381 of the Report of the Proceedings) he had especially insisted that a sunken rock should be shown by a cross accompanied by a figure giving the depth whenever the depth was less than 10 metres :

*a*) 


*b*) $+_5$

He had also insisted that the figure showing the depth should be of a different type to the other figures given in the chart in order that it should be quite clear that the depth is that of the point shown by the cross and not that of the place where the figure is.

With regard to the dotted line indicating the danger zone, it would be useless in the case of pinnacles the surface of which was very small. It might be reserved for zones the area of which was rather larger and which must be shown as dangerous.

Captain Edgell (Great Britain) would like to understand how far this proposal applied to countries which employed fathoms and feet on charts.

He pointed out that the normal way of showing *a*) would be




and wished to know whether the intention of Commander Björset's proposal was to add a cross making the symbol




or




The Secretary General, in explanation of Commander Björset's proposal, said that in the opinion of this Delegate the dotted line would not always be necessary, but that it would be sufficient in the case of a pinnacle.

rock to put a cross which should give the exact place, with a figure alongside indicating the depth at that place. In order to avoid this figure being taken for the indication of a sounding taken at the exact position of the figure, one should make use of a different kind of figure so as to show at first glance that the depth was not where the figure appears on the chart, but at the exact place where the rock is indicated by the cross.

COMMANDER BJORSET (Norway) said that this was exactly what he meant to say.

REAR-ADMIRAL YONEMURA (Japan) stated that there were two different words in Japanese to indicate sunken rocks and sunken pinnacles. He was under the impression that the 1926 Committee had proposed a symbol which applied only to " sunken pinnacles " in spite of the fact that the London Conference had adopted a symbol which applied in a general way to all sunken rocks, even when they were not pinnacles. In consequence, he would propose that the adopted symbol should be kept with the meaning which the London Conference had given it, namely " as applying to any kind of sunken rock whether pinnacle or not. " He proposed further that a new symbol should now be adopted which should indicate pinnacles.

In short, his proposal was to employ the symbol adopted in London  for sunken rocks in general and for pointed rocks (pinnacles) the symbol together with the figure 

(*Discussion of this question was postponed to a later date*).

THE PRESIDENT announced to the Committee on Charts and to the Committee on Documents that Mr Roper, Secretary General of the International Commission for Air Navigation at Paris, would henceforth take the place of Commander Brivonesi on those Committees.

The Committee on Charts would hold a meeting this afternoon at 2.30.

To-morrow, Plenary Meeting at 9 a.m.

(The Meeting adjourned at 12.30 p.m.).

# 6th PLENARY SESSION.

(16th April, 1929).

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The Meeting opened at 9 a.m., with the President, Rear-Admiral W.S. Crosley (U.S.A.) in the Chair.

*ADOPTION OF THE MINUTES OF THE LAST MEETING.*

(*The Minutes of the Fifth Plenary Session were approved*).

## 52a. Exchange of the I.H.B.'s publications for those of the Consejo Oceanografico Ibero-Americano.

The President announced that owing to the Committee on Charts holding a meeting at 2.30 p.m., the Committee on Documents would meet at 3 p.m.

*COMMUNICATION FROM THE SECRETARY GENERAL.*

The Secretary General read the following communication:

> "In the name of the Directing Committee of the Consejo Oceanográfico Ibero-Americano, Alcala 31, Madrid, of which Professor Odòn de Buen is the President, taking into account the advantages which may result from an interchange of publications between this institution and the International Hydrographic Bureau, I propose that the latter should send to the Council those which have already been published as a contribution from the Bureau to its library. The Council will also send all its publications to the I.H.B."

This proposal was made by the Delegate of Peru and was supported by the Delegations of the Argentine, Spain, Portugal and Chile.

Captain Caballero Y Lastres (Peru) (translation) declared that the Consejo Oceanográfico Ibero-Americano was an institution of the countries using the Spanish or Portuguese languages. Its chief aim was the expansion of oceanographic, hydrologic and limnological work. The formation of this Council was the result of a suggestion made by the Copenhagen International Council for the Exploration of the Sea. This International Council had special commissions for the Atlantic, the Mediterranean and other seas, but the Eastern Pacific and the Latin countries were not represented. The Congress of Prague had asked Professor Odòn de Buen to urge the Spanish Government to join the Council. Professor Odòn de Buen's efforts

had been crowned with success and Spain, Portugal and the Latin American countries had become members. The help of the International Hydrographic Bureau would be greatly appreciated by this new association.

(*The Conference put this proposal on its Agenda*).

## 7. Depth Contours and Danger Line.

THE PRESIDENT asked if the Chart Committee was ready to submit its suggestions on this question.

CAPTAIN EDGELL (Great Britain) stated that he was under the impression that the Sub-Committee had practically arrived at a deadlock and that it was intended to refer the question back to the Bureau for examination. He would be glad if Commodore Reinius could offer a statement on this point as he, Capt. Edgell, had not attended the discussion.

COMMODORE REINIUS (Sweden) declared that the Committee on Charts had decided to refer the question back to the Bureau for examination, and would submit certain guiding principles as to the manner in which the question should be considered afresh. The Sub-Committee was at present engaged on the study of these principles and hoped they would be ready this afternoon.

THE PRESIDENT stated that he deduced from these remarks that the question would have to be postponed.

(*The question was postponed*).

## 4. Symbols for Sunken Rocks.

(*Continuation of Discussion*).

COMMANDER MIURA (Japan) stated that the Japanese Delegation concurred in thinking the 10 metre limit was not sufficient. In the case of submarines it might, for instance, be dangerous to show only this limit. Consequently he thought it would be better to leave the indication of depth to the discretion of the national Hydrographic Offices.

THE SECRETAY GENERAL pointed out that it was intended that this symbol should show all the rocks constituting a danger for navigation whether surface or under water, and that there was no intention of making any distinction between the rocks which are dangerous to submarine navigation and those dangerous to surface navigation.

COMMODORE REINIUS(Sweden) stated that he agreed with the Japanese Delegation.

COMMANDER PARKER (U. S. A.) remarked that there would be considerable difficulty in using this new symbol in all countries and said that his Delegation preferred to maintain the symbol adopted by the London Conference. Nevertheless, it accepted the proposal of the Bureau which introduced certain modifications of slight importance and provided a new symbol which could be used by those countries that might decide in its favour.

The President noted that the first paragraph of the proposal would have to be drafted as follows :

" It is agreed to adopt the symbol ⊕ for a rock of small area (pinnacle). "

The remainder of the paragraph,

" with depths of 10 metres or less over it at Low Water, "

should be suppressed.

He pointed out, however, that if these words were deleted the remainder of the paragraph had no meaning.

Commander Bjorset (Norway) stated that he was prepared to amend his proposal and to substitute 15 metres for 10 metres.

Commodore Reinius (Sweden) supported this suggestion.

The President put to the vote the first amendment :

" It is agreed to adopt the symbol ⊕ for a rock of small area (pinnacle). "

(*This amendment was not adopted*).

(*Commander Björset's amendment substituting 15 metres for 10 metres was not adopted*).

The President brought the discussion back to the printed text on page 13 of the Proposals.

Commander Kurze (Germany) did not understand why, if the words: " with depths of 10 metres or less over it at Low Water " were deleted, it would be necessary to suppress the remaining two paragraphs of the proposal.

The President replied that the discussion only referred to the first paragraph, which he put to the vote.

" It is agreed to adopt the symbol ⊕ for a rock of small area (pinnacle) with depths of 10 metres or less over it at Low Water.

(*The first paragraph was adopted*).

Captain Edgell (Great Britain) proposed a change in the English draft of the second paragraph in order to make its meaning clearer, suggesting that the word " alone " at the beginning should be deleted and replaced by the words " by itself. "

The President agreed with this proposal.

Rear-Admiral Yonemura (Japan) said that it appeared to him that the first two paragraphs proposed the adoption of the symbol alone without showing the figures and this might give rise to doubt. He did not understand whether in the case provided for in the first paragraph it was necessary to give figures.

The President declared that the reply to this question could be found in the third paragraph.

Rear-Admiral Yonemura (Japan), having pointed out that the third

paragraph started with the following words, " If it is desired to insert the exact depth ", asked whether this indication was or was not obligatory.

(*The second paragraph of the Bureau's proposal was adopted*).

" The symbol, alone, shall be used for a rock over which the depth is less than 2 metres at Low Water, or for a rock over which the depth is unknown, or if the scale of the chart is too small to insert the depth. "

Third paragraph :

" If it is desired to insert the exact depth, this depth shall be indicated by a number placed inside the symbol, as follows :




COMMANDER RASIKOTSIKAS (Greece) (translation) pointed out that according to this text this symbol might be used for a depth of less than 2 metres, contrary to the decision of the London Conference, which laid down that rocks at a depth of less than 2 metres should be shown by a cross without figures.

He proposed therefore that the draft should read :

" *If the depth is over two metres and* it is desired to insert the exact depth.... ".

CAPTAIN CLAUSSEN (Germany) thought that it would sometimes be impossible to insert the figure inside the symbol, since two symbols might be placed close together and consequently the figure could not be placed inside.

He proposed therefore that the draft should read :

" .... this depth shall be indicated by a number placed, *if possible,* inside the symbol, as follows. "

COMMANDER BJORSET (Norway) supported this proposal.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) recalled that a sounding was usually marked on the exact spot where the depth had been measured. The insertion of this figure next to the cross was an innovation which, as had been pointed out, might be highly disadvantageous. As a result soundings might be inserted at a considerable distance from their true position.

With regard to pinnacles, it appeared to him possible, whenever the scale of the chart permitted, to confine oneself to inserting the figure of the depth at the exact spot.

THE SECRETARY GENERAL drew the attention of the Delegate of France to the last paragraph which was in brackets and laid down that the numeral should be of a different printing type to that of the soundings on the chart.

The symbol containing the cross was preferable to a mere indication of the soundings, as it was more likely to attract the navigators' attention.

CAPTAIN EDGELL (Great Britain) admitted that the cross attracted the mariners' attention, *but when shoal soundings were shown they were*

*nearly always surrounded on the chart by a contour line and carried an indication of the nature of the sea bed.* This sufficed to *warn* mariners against any danger to which they might be liable.

The Delegate of Great Britain supported the Greek Delegate's proposal.

The President put the following draft text to the vote :

"If the depth exceeds two metres and it is desired to insert the exact depth, this depth shall be indicated by a number placed, if possible, inside the symbol as follows :




(The numeral should be of a different printing type from that of the soundings on the chart)."

(*This text was adopted*).

## 36. Dissemination of Notices abroad and centralisation of Notices in the principal ports.

The President invited the Delegates to refer on the same subject to the "Supplement to the Proposals" N° 36a : "Centralisation of Notices to Mariners in the principal ports."

He would remind the Delegates that the first question to be solved was whether the centralisation of Notices was desirable.

H.E. Napier Tomlin Pasha (Egypt) stated that this service had been instituted by the Egyptian Government both at Alexandria and Port Said. A few months ago Consular Agents seemed very eager to obtain this centralisation of Notices ; but ever since it had been instituted, nobody had come forward to take cognisance of the Notices.

Captain Hooykaas (Netherlands) declared that the Dutch Delegation approved the principle of centralisation of Notices. The Hydrographic Bulletin had announced that the Netherlands had started to put it into effect.

Before leaving for Monaco, the Dutch Delegates had received letters from the Harbour Masters of Rotterdam and Amsterdam informing them that the centralisation service was completely organised but that apart from Dutch Notices the only ones they had received came from Finland.

In reply to H. E. Tomlin Pasha's observation, Captain Hooykaas would recommend that one should not be in too great a hurry because ships' captains would only learn of the existence of centralisation services little by little and would gradually accustom themselves to making use of them.

The Dutch Delegation regretted that certain Hydrographic Services — some of them most important — had not before now found it advisable to co-operate in the organisation in view. Even if some Hydrographic Services did not at present see the use of the centralisation of Notices they should at any rate realise that the system had some good in it, while it was not costly.

Should the plan now submitted to the Conference be adopted, Captain Hooykaas expressed the hope that all Hydrographic Services would co-operate, even those which did not now fully appreciate the use of the centralisation of Notices.

COMMODORE REINIUS (Sweden) shared Captain Hooykaas' opinion. On his way to Monaco, he had passed through two Swedish ports where Notices were centralised. He had enquired from the Harbour Masters how they were being employed by mariners. One answer had been that Notices were often referred to ; the other that no one had yet consulted them. Both Harbour Masters, however, were under the impression that mariners did not refer to the Notices because they were still ignorant of the fact that these Notices could be consulted in the ports in question. It had therefore been arranged that when ships entered harbours the Harbour Master should inform each captain that Notices were at his disposal for examination.

THE PRESIDENT invited the Delegates who wished to become acquainted with the system now in force in the United States, to read the Hydrographic Bulletin of 1929, N° 4, page 88.

COMMANDER PARKER (U. S. A.) pointed out that the United States had accepted the proposal of the Hydrographic Bureau, but putting it into force seemed to take a considerable amount of time. He was ignorant as to the real reasons for this delay but thought they might only be administrative ones.

Before leaving Washington, Commander Parker had ascertained that henceforth the Notices to Mariners would be communicated regularly to all centralisation stations, the list of which was given by the I.H.B.

COMMANDER BJORSET (Norway) declared that the dissemination of Notices abroad was much more important to the countries which issue Notices to Mariners concerning the whole world than to countries whose publication of Notices was limited to their own coasts. It was important, however, that every country should co-operate in order that widespread publication be attained.

THE PRESIDENT was under the impression that no Delegate was opposed to the adoption of the principle of centralisation.

(*This principle was adopted*).

THE PRESIDENT stated that the best method for obtaining this dissemination of Notices abroad was now the question to solve.

The Bureau's proposals were inserted on page 48 of the book of Proposals.

CAPTAIN ROMAGNA-MANOIA (Italy) believed that it would be extremely difficult to adopt the proposal as submitted by the Bureau. He would prefer a system similar to that used in Great Britain.

He proposed that the draft proposal of the Hydrographic Bureau should be amended as follows :

" 1. The Hydrographic Offices shall make known to the International Hydrographic Bureau the ports of *foreign countries*

*to which their Notices are already sent or to which they will send them and the addresses to which these Notices should be sent in such ports.*"

Paragraph 2 to remain unchanged.

Paragraph 3 to read as follows : —

"*After this list has been issued, each Hydrographic Office* shall make known to the I.H.B. *any modification to be introduced.*"

Paragraph 4 to remain unchanged.

Paragraph 5 to be amended as follows :

"5. The Hydrographic Offices shall inform mariners by means of their Notices to Mariners of the ports and addresses where *the centralisation thus constituted is in operation.*"

If the above amendments were accepted, each country, instead of having to distribute its Notices broadcast, would merely forward them to the ports in which it was interested. This would result in an appreciable economy in comparison with the system proposed by the Bureau.

The President thought he would be conveying the sense of Captain Romagna-Manoia's proposal correctly by saying that every national Hydrographic Office should notify the I. H. B. of the ports to which it agreed to send its Notices to Mariners.

It would appear that the Hydrographic Offices should first have a list from which they could make their choice. The system suggested seemed the most likely to yield the desired result.

Captain Hooykaas (Netherlands) understood that according to the President it was unnecessary to send these Notices to Mariners to all the ports mentioned in the lists. A vessel, for instance, sailing from Shanghai to Copenhagen would find the Notices to Mariners relating to the last part of her voyage at a port nearer than Shanghai. It would appear on these grounds sufficient to distribute the Notices to Mariners at the nearest ports.

He added that the Netherlands published twice a year in their Notices to Mariners a list of the addresses in the ports where these Notices may be consulted.

Finally he did not believe it impossible for any Hydrographic Office to distribute the Notices free of charge. Consequently he requested the deletion of the words "if possible" at the end of the third Proposal of the Bureau.

H.E. Napier Tomlin Pasha (Egypt) stated that this system had already involved Egypt in a considerable outlay and if his country were to be obliged to incur further expenditure for the Notices to Mariners it received, it would find itself forced to recover these costs from the mariners who desired to consult the Notices.

The President put paragraph 1 of the Bureau's proposal to the vote.

"1. The Hydrographic Offices shall make known to the International Hydrographic Bureau the ports of their country and

colonies for which they desire the service of centralization of the notices issued by other nations and the addresses to which these notices should be sent."

(*This paragraph was adopted*).

THE PRESIDENT put paragraph 2 of the Bureau's proposal to the vote.

" 2. The International Hydrographic Bureau will publish the list of these ports and of these addresses. "

(*This paragraph was adopted*).

THE PRESIDENT pointed out that nobody had objected to Captain Hooykaas' motion for the deletion of the words " if possible " and put the third paragraph of the Bureau's proposal to the vote, the words " if possible " being deleted.

" 3. The Hydrographic Offices shall then inform the International Hydrographic Bureau of those ports to which they agree to send their notices free of charge.

(*This paragraph was adopted as amended*).

THE PRESIDENT, replying to a question by CAPTAIN LUYMES, said that as nobody had seconded the suggestion made by Captain Romagna-Manoia, he had not deemed it necessary to put it to the vote.

CAPTAIN LUYMES (Netherlands) stated this was regrettable, as he had desired to second this motion.

THE PRESIDENT put paragraph 4 of the Bureau's proposal to the vote.

" 4. The International Hydrographic Bureau will publish the revised list of ports and addresses and of the National Offices which send their notices to each. "

(*This paragraph was adopted*).

CAPTAIN LUYMES (Netherlands) seconded the draft amendment to paragraph 5 of the Bureau's proposal submitted by the Delegate of Italy.

THE PRESIDENT stated that the draft paragraph 5 suggested by the Delegate of Italy read as follows :

" 5. The Hydrographic Offices shall inform mariners by means of their Notices to Mariners of the ports and addresses where the centralisation thus constituted is in operation. "

CAPTAIN LUYMES (Netherlands) withdrew his remark concerning paragraph 5 in view of the fact that the main proposal suggested by Captain Romagna-Manoia referred to the preceding paragraph.

THE PRESIDENT pointed out that the proposal made by Captain Romagna-Manoia and supported by Captain Luymes would not have changed the meaning of paragraph 5 of the Bureau's proposal.

He put paragraph 5 of the Bureau's proposal to the vote.

" 5. The Hydrographic Offices shall inform mariners by means of their Notices to Mariners of the ports and addresses where this centralization is in operation.

(*This paragraph was adopted*).

Captain Hooykaas (Netherlands) urged the Delegates who had not voted for this proposal to co-operate nevertheless in putting it into effect.

## 36a. Centralisation of Notices to Mariners in the principal ports.

The President proposed that the words "captains of vessels" in the last line of the second paragraph should be replaced by the word " seamen. " This was merely a drafting amendment which did not in any way affect the substance of the proposal.

None of the Delegates having asked to be allowed to speak, the President put the Bureau's proposal to the vote.

" The Hydrographic Offices should indicate periodically (annually for example) by means of Notices to Mariners, the ports with centralising services to which they send their Notices to Mariners and at which seamen can consult them.

" It will be of advantage if this list be inserted in the Sailing Directions. "

(*This proposal was adopted*).

## 37. Limits of Oceans and Seas.

The President emphasised the fact that this question was closely connected with Special Publication N° 23.

(A chart extracted from Special Publication N° 23 was distributed among the members of the Conference).

The President thought that as this chart had been circulated among the Hydrographic Offices of the various countries over six months ago, all the Delegates would now be ready to submit any observations they might feel called upon to make.

He requested the Secretary General to explain the point of view of the I. H. B.

The Secretary General stated that when the London Conference decided to fix the limits of closed seas it was decided that the straits joining two of these seas should be included wholly in one sea. When the I. H. B. sought to carry out the decisions of the London Conference it was also led to fix the limits of the oceans, since, although they were not closed seas, it frequently occurred that an ocean and a closed sea possessed a common limit.

The limits now proposed to the Conference obviously gave rise to objections. Thus a protest had been entered because certain parts of the Straits of Gibraltar geographically situated in the Atlantic Ocean had been placed in the Mediterranean. Objections of this nature were to be foreseen in face of the decision made by the London Conference to place a strait wholly in one sea.

He thought that a large number of the complaints received by the I. H. B. on this point were due to the fact that the countries in question had

not quite understood the London decision. Some countries, moreover, appeared to have misunderstood the purpose contemplated in fixing the limits of seas and he would like to explain the aim in view.

Certain countries, for instance, publish Notices to Mariners entitled " The Red Sea. " The zones to which the remarks printed in these Notices to Mariners referred were not necessarily the same as those to which other navigators gave the name of the Red Sea. As a result, on reading the title of a publication, navigators did not always know if they were in the precise zone to which that publication related.

The proposal before the Conference was, of course, the result of a compromise. The I. H. B. prepared a preliminary draft in 1923 which was distributed to the States. The latter forwarded their observations, which were frequently incompatible, and it was a material impossibility to satisfy everyone. The I. H. B. had nevertheless made every effort to satisfy the largest possible number.

One of the main objections submitted by the States related to the limits of the Southern Ocean (numbered 58 in the chart). It was perhaps because this Ocean had been left white on the chart, when it might have been coloured red, that certain countries thought it was meant as a counterpart to the Arctic Ocean. Certain persons in the Union of South Africa and Australia had informed the Secretary General (unofficially, of course) that it was wrong to state that their southern coasts were washed by the Antarctic Ocean.

It would, of course, be quite a different matter if, for example, one were dealing with the character of the currents ; the present object, however, was to endeavour to achieve a proper delimitation of the oceans and seas in order that the areas dealt with in Notices to Mariners and Sailing Directions might be easily grasped and to make it possible on reading the title of a chapter to understand at once the precise zone to which that chapter referred.

CAPTAIN EDGELL (Great Britain) stated that the whole question seemed to be one which was outside the province of the I. H. B. So far as Great Britain was concerned an arbitrary limitation of oceans and seas was not a matter which the Hydrographic Department could deal with unsupported by other Government Offices and if it was the intention that the limits as set forth in the I. H. B. proposal were only intended for use by the Hydrographic Offices of nations, it did not seem to be of sufficient importance to justify the expense which would be entailed by those Hydrographic Offices of long standing which have already fixed routines and divisions for their Sailing Directions, Light Lists, etc., for the adoption would entail a vast amount of corrections to those publications and extensive amendments to the titles and other portions of the charts. He fully appreciated the work entailed for the I. H. B. in the preparation of this compromise, but regretted that he was obliged to suggest that it be not accepted.

H.E. NAPIER TOMLIN PASHA (Egypt) and CAPTAIN CLAUSSEN (Germany) declared themselves in favour of Captain Edgell's statement.

Commander Miura (Japan) explained that the Japanese Delegates had objected to the proposal submitted to the previous Conference of 1926, since in their opinion it was rather a political and diplomatic question and exceeded the scope of the Conference. Nevertheless, the Japanese Delegation was in favour of a delimitation of the seas after due study of the problem in accordance with the guiding principles laid down by the Bureau.

He added that Rear-Admiral Yonemura accepted the I.H.B. proposal, but in order to prevent any misunderstanding or possibility of confusion as regards these limits, the word " limits " in the title should be replaced by the words "International Hydrographic Names and Limits. " He referred to a British publication called " Brown's Practical Pocket Book for Seamen ", in which the symbols adopted by the International Hydrographic Conference were mentioned under the title of " International Hydrographic Symbols. "

Commander Bjorset (Norway) recalled that it was stated in the appendix of Special Publication N° 23 that the German Delegation had suggested the modification of the name of the sea provided under N° 8. It should be called " North European Sea " instead of Norwegian Sea. The Norwegian Government had found the question so important that they had appointed a special Committee to consider it and had arrived at the conclusion that the name of " Norwegian Sea " should be maintained.

It is evident that he could not recommend his Government to reverse the decision of this Committee and therefore he maintained that the name " Norwegian Sea " must be used in the future.

Captain Luymes (Netherlands) observed that as these divisions were established chiefly for the alloting of titles on Notices to Mariners, the system suggested would not seem to be totally adequate to him. Certain seas, for example, the Southern Ocean, had been left to form a very large area and had not been subdivided. It would be inconvenient to collect all Notices to Mariners relative to this zone under that single heading.

On the other hand, certain other seas had been subdivided to the extreme ; he would mention the Gulf of Akaba as an example ; this gulf was very small and could easily be connected with the Red Sea.

Another objection to this plan was the converging of three divisions at Cape Horn, Cape Agulhas, etc... If, for instance, a Notice to Mariners was to be issued on the vicinity of Cape Agulhas, how would one know whether it should be given under the heading South Atlantic Ocean, or Indian Ocean or again Southern Ocean.

The Secretary General admitted that a large variety existed in the relative sizes of the seas shown on this chart. He had drawn up the chart himself but all these relatively small seas had been included at the request of States Members of the I. H. B. His first intention had been to show important small areas, only such as the Kattegat, Sound and Belts. The Gulf of Akaba had been inserted in this chart at the request of certain States Members of the I. H. B.

It would be possible to return to the original proposal made by the Secretary General to place the limit of the Southern Ocean more to the

south, by making the meridians of the southern capes the limits between the Oceans. The meridian of Cape Leeuwin might be followed southwards of that Cape as far as the fortieth parallel as a limit and from thence onwards a rhumb line passing through that point and the southern extremity of Tasmania, the waters within those lines being called the Great Bight of Australia.

As regards the denomination of the " Norwegian Sea " the Secretary General declared that he had found it in the publications issued by several countries. The northwestern part of this sea was also called "Greenland Sea", which is why it had been denominated " Norwegian or Greenland Sea. " To name it " North European Sea " would possibly entail confusion with the North Sea.

CAPTAIN CLAUSSEN (Germany) stated that this proposal from the German Delegation did not only emanate from the German Hydrographic Service but also from the German Institute of Geography by whose decision the German Hydrographic Service was bound to a certain extent.

COMMANDER SAILLANT (France) (translation) said that in the opinion of the French Delegation, the limits suggested would not be binding as regards Notices to Mariners and Sailing Directions ; it was better to go on — as was done by certain countries — with the divisions created by nature or by the needs of navigation or even by political divisions, such as " French Coasts " or " Italian Coasts. "

One would thus be less exposed to fluctuations than by making use of the suggested limits, which were somewhat arbitrary.

(*The proposal to reject the suggestion made by the I. H. B. was rejected, with a majority of 10 votes against 7*).

THE SECRETARY GENERAL explained that the putting into force of this proposal being likely to entail an expense, it should not be applied immediately but only gradually, till its application had become general.

THE PRESIDENT considered that the proposal from the I.H.B. was *adopted.*

COMMANDER RASIKOTSIKAS (Greece) (translation) suggested that this chart might subsequently be modified in accordance with proposals made by States Members.

(*This proposal was adopted*).

CAPTAIN ROMAGNA-MANOIA (Italy) (translation) declared that the Italians considered that the Gulf of a Genoa was a part of the Tyrrhenian Sea.

THE SECRETARY GENERAL explained that this limit had been drawn according to the indications given by Captain Romagna-Manoia's predecessor in the Italian Hydrographic Service.

The next meeting would be held to-morrow at 9 a.m.

(The meeting adjourned at 12.30 p.m.).

# 7th PLENARY SESSION.

(17th April 1929)

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The Meeting opened at 9 a.m., with the President, Rear-Admiral W.S Crosley (U.S.A.) in the Chair.

*ADOPTION OF THE MINUTES OF THE LAST MEETING.*

(*The Minutes of the Sixth Plenary Meeting were adopted*).

*COMMUNICATION BY THE PRESIDENT.*

The President informed the Conference that H. S. H. Prince Pierre of Monaco would honour the meeting with His presence at 10.30 a. m. to-morrow. Advantage would be taken of this event to photograph the members of the Conference.

## 52a. Exchange of the I.H.B.'s publications for those of the Consejo Oceanografico Ibero-Americano.

The President invited the members of the Conference to refer to the Proposal of the Delegate of Peru on page 1 of the Minutes of April 16th which he submitted for debate.

(*None of the members having asked permission to speak, the proposal was adopted*).

## 38. Use of English or French in publications other than those in English or French.

The President opened the discussion on the first paragraph of the Proposals made by the 1926 Committee.

> "The catalogues of Charts which are published in languages other than English or French should be translated into English or French in order that they may be read and understood by mariners of any nationality. The introduction, preface, headings of columns, etc., at least should be translated into English or French, as is the case, for example, in the Swedish catalogue of charts."

Commander Rasikotsikas (Greece) (translation) reminded the Conference that Greece had published a Catalogue of the distances between ports

in accordance with the principle recommended and proposed that the words " and the Greek Catalogue of Distances " should be added at the end of the first paragraph of the Proposal.

COMMANDER BJORSET (Norway) said that he did not quite grasp the exact scope of the words " devront être traduits " in the first paragraph of the French text ; this expression seemed to him more imperative than the words employed in the English text.

H.E. NAPIER TOMLIN PASHA (Egypt) supported the amendment of the Greek Delegate.

*(The first paragraph of the Proposal was adopted with this amendment).*

THE PRESIDENT opened the discussion on the second paragraph.

> " It is desirable that an English or French summary be given of any publication issued by a Hydrographic Office to draw attention thereto. "

CAPTAIN LUYMES (Netherlands) feared that apart from incidental publications such, for instance, as a scientific work on one of the branches of hydrography it would be difficult to carry out the proposal expressed in the second paragraph. The principal publications of the Hydrographic Offices — other than charts — were Sailing Directions and a summary of them was not possible. Only a total translation would suffice, and he did not deem it possible that a general understanding concerning the texts of those Directions and their publication by the original authors both in their own language and the languages of the Bureau could be brought about in the near future. Foreign States would have to refrain from publishing these works since otherwise such an edition would not pay. This was, of course, a dream of the future, but it might be useful now to lay down a guiding principle for the Bureau.

THE SECRETARY GENERAL observed that there was a considerable discrepancy between the English and French texts adopted by the 1926 Conference. Translated literally into English, the French text would mean :

> " The Committee considers it desirable that an English or French summary be given of any publication issued by a Hydrographic Office to which it desires to direct attention. "

LIEUTENANT COMMANDER LUISONI (Argentine) (translation) proposed that the draft of the resolution should begin with the words " It is desirable that... "

CAPTAIN EDGELL (Great Britain) stated that he also had been rather doubtful as to the full force of the expression employed in the English text as translating the French words " devront être... ". He considered, however, that the French text and an exact translation of this text into English might give satisfaction to all the Delegates.

THE PRESIDENT put to the vote the amendment of the Argentine Delegate consisting of the insertion of the words :

"The Conference considers it desirable that..."

at the beginning of the text of the proposal.

(*This amendment was adopted*).

(*The second paragraph was adopted, it being agreed that the English text should be brought into line with the French text*).

(*The third paragraph was adopted unchanged*).

"That any interesting publication concerning Hydrography might be published in French and in English by the International Hydrographic Bureau, permission to reproduce having first been obtained from the authors."

## 39. Copyright of Hydrographic Publications.

Ing. Hydrographe en Chef Cot (France) (translation) understood that this Proposal did not concern the original work of certain Hydrographers published in hydrographic periodicals. The copyright of such scientific works was vested in the authors.

Moreover, this question was governed by legislation outside the scope of this Conference.

Commander Bjorset (Norway) agreed and proposed that the suggested authorisation should be limited to Charts, Sailing Directions and Notices to Mariners.

The President intimated that another proposal had been suggested to him by the I. H. B., namely that this paragraph should only refer to publications with respect to which no copyright had been applied for.

Captain Edgell (Great Britain) stated that he was not very well aware of the British Copyright Laws, but thought that in Great Britain there was a Crown Copyright on the Charts.

The solution indicated by the Chair would therefore really go against the intentions of the Conference.

The British Delegate thought, moreover, that the authors referred to by M. Cot were usually protected by the Copyright Laws.

Ing. Hydrographe en Chef Cot (France) (translation) explained that, to his mind, the publications which could be reproduced by Hydrographic Services were those of an impersonal character, such as Charts, Sailing Directions, Notices to Mariners and any others of the same character.

The French Delegate proposed the wording :

"..... all publications of other Hydrographic Services which are *of an impersonal character.*"

Captain Edgell (Great Britain) seconded this proposal.

Ing. Hydrographe en Chef Cot (France) (translation) pointed out that the London Conference had drafted this text. He wondered whether the present Conference could modify it.

CAPTAIN LUYMES (Netherlands) recalled that other decisions of the London Conference had already been modified, for instance that concerning the symbol for wireless stations.

THE PRESIDENT suggested the suppression of any reference to the London Conference and the statement that " The Conference expressed the wish..... ".

ING. HYDROGRAPHE EN CHEF COT (France) (translation) accepted this suggestion.

THE PRESIDENT put the following text to the vote:

The Conference expressed the following wish :

" It is desirable that every Hydrographic Office should be free to reproduce, except in facsimile, all impersonal publications of other Hydrographic Offices, provided that such reproduction should have printed on it a due acknowledgment of the original source from which it is derived. "

(*This text was adopted*).

## 48. Safety Lanes and Danger Zones.

THE PRESIDENT invited the Delegates to read the proposal submitted. He was under the impression that this proposal was more within the scope of the Conference on Safety of Life at Sea, which would meet shortly in London, to which it might be referred. He had not yet seen the agenda of that Conference.

He proposed the following resolution :

" The Conference takes cognisance of the Conference on Safety of Life at Sea shortly to meet in London. Thus at this time, the Conference takes no action in respect of the proposal submitted. "

COMMANDER MIURA (Japan) on behalf of REAR-ADMIRAL YONEMURA read the following statement :

" The discussion of this Proposal does not seem wholly to fulfil all the aims of the Statutes, especially Article 6.

" This Proposal, however, is that which can best insure safety in travel at sea; in spite of the text ot this article therefore, such a study is desirable.

" The Japanese Hydrographic Office has spent some years in examining and studying the lanes in the North Pacific Ocean and I have brought with me here a part of the material employed in this investigation. I am thus in a position to show you a chart of the sea lanes. "

(*The chart was exhibited in the Conference Hall*).

" In my opinion such enquiries would, by means of the co-operation of all nations, lead to a happy solution of the question.

"I am a specialist in navigation and in the course of many years have acquired experience in this question; I have therefore taken a personal interest in this question.

"One must not, however, give expression in a Conference to one's personal experiences and I have to thank you for the kind attention with which you have listened to me."

The President stated that he did not think there were any maritime lanes which were properly speaking international but such might be called into existence after the London Conference. At present this question was more a matter for the individual shipping companies.

## *REPORT OF THE FINANCE COMMITTEE.*

The President thought that the Conference should not begin the discussion of this report, which had just been circulated, before all the Delegates had had an opportunity of reading it carefully.

His attention had, nevertheless, been drawn to a passage in the report referring to a "Retirement Fund for the Staff with the exception of the Secretary General."

It was perfectly clear, according to Article 59 of the Statutes, that the Secretary General was selected by the Directing Committee from three candidates named by a Conference.

The Secretary General thus is an elected official and is clearly placed outside the staff of the Bureau. This impression was confirmed by the first paragraph of Article 60 of the Statutes :

"If between Conferences a vacancy occurs in the Directing Committee or in the post of Secretary General, the by-election for the purpose of filling the vacancy shall be conducted by letter unless, in the opinion of the Directing Committee, the near approach of a Conference makes this unnecessary."

This text clearly shows that the post of Secretary General is an elected one.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) agreed with the President. He desired, however, to make a reservation with regard to the situation of the Secretary General as indicated in Article 28 of the Statutes :

"The personnel shall consist of a Secretary General and a certain number of technical and administrative employees."

This provision would allow the Secretary General to request that the Staff Regulations should be applied to him.

Captain Baum (U. S. A.) (Chairman of the Finance Committee) stated that he was just as uncertain as the Directing Committee concerning the precise situation of the Secretary General.

The President stated that, having foreseen this remark, he had intended to suggest an amendment to Articles 27 and 28 of the Statutes.

He thought that the new text of Article 27 should be :

"The Secretary General of the Bureau" (instead of the "the personnel of the Bureau") "is placed under the supervision of the Directing Committee."

Further, Article 28 should read as follows :

"The personnel of the Bureau consists of a certain number of technical and administrative employees who work under the orders of the Secretary General."

(*The discussion was adjourned*).

(The Meeting rose at 12.05 p.m.).

# 8th PLENARY SESSION.

(18th April 1929)

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The Meeting opened at 9 a.m., with the President, Rear-Admiral W.S. Crosley (U.S.A.) in the Chair.

*ADOPTION OF THE MINUTES OF THE LAST MEETING.*

(*The Minutes of the Seventh Plenary Meeting were adopted*).

*COMMUNICATIONS BY THE PRESIDENT.*

Exhibition of Instruments.

The President informed the Conference that the supersonic sounders and the Idrac current meter were now on exhibition. As some of the instruments would have to be sent back shortly, members should now take the opportunity of visiting the exhibition.

Convocation of the Committee on Documents.

The President announced that the report of the Committee on Documents had been distributed. The members of this Committee were requested to meet in the Conference Hall at 2 o'clock in order to correct the Minutes.

(*The Conference then continued the examination of the Agenda*).

## 7. Depth contours and danger line.

The President announced that the proposals of the Sub-Committee concerning contour lines for soundings in metres had been distributed. These proposals concerned N° 7, which was on the agenda and on which no decision had yet been made. He asked the Delegates to examine this new document.

Captain Edgell (Great Britain) pointed out that the Sub-Committee proposed, in the second paragraph, the adoption of a line of dots as the general danger line. By looking at the second part of the document, one could see that this same line of dots could also replace the 10 metre line of one dot and one long dash · —— · On certain charts the 10 metre line was close to the general danger line. It would be highly inconvenient to adopt the same symbol for these two lines.

The President declared that the Delegate of the United States was also of opinion that the same symbol should not be adopted for two different depths.

ING. HYDROGRAPHE EN CHEF COT (France) observed that the Sub-Committee considered the signs and symbols it had proposed were simply a basis for examination by the I.H.B.

In these circumstances, therefore, perhaps it was not necessary to come to an immediate decision concerning this important question, which could be referred to a subsequent Conference.

THE PRESIDENT said that the I. H. B. wished to have an exact idea of the wishes of the present Conference, which should give its views now on the Sub-Committee's report.

He suggested that in order to expedite the work a separate vote should be taken on each paragraph of the Report, and he put the first paragraph to the vote.

1. The Sub-Committee has realised, firstly, that great latitude should be reserved to the Hydrographic Offices concerned as to the number of contour lines to be placed on the charts. They should employ only those which they consider useful, but should, if possible, select them in accordance with the uniform system of lines which will be adopted.

(*This paragraph was adopted*).

THE PRESIDENT asked if any Delegate desired to comment on the second paragraph.

CAPTAIN LUYMES (Netherlands) explained that to his great regret the point brought out by Captain Edgell had escaped his notice because he had been obliged to leave the Sub-Committee during its discussion of this matter in order to attend another Committee. He admitted the justice of Captain Edgell's observation and suggested the suppression of the dotted line symbol for the 10 metre line of equal depth.

THE PRESIDENT put to the vote the proposal for the suppression of the dotted line symbol for the 10 metre line of equal depth.

(*This proposal was adopted*).

THE PRESIDENT put the second paragraph of the Sub-Committee's report to the vote.

2. The Sub-Committee adopts the expression "general danger line" to denote, not a contour line, but a fixed line, enclosing a part of the sea which mariners should avoid altogether (whatever the draught of water of their ship) on account of the great number of obstacles to navigation. It adopts the symbol which is already used by Great Britain and several other nations for this line; that is to say, a line of dots.

(*This paragraph was adopted*).

THE PRESIDENT asked if there were any comments on the third paragraph.

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) pointed out that the beginning and the end of the first sentence of the third paragraph were in contradiction.

The Secretary General admitted the justice of this observation and said that after the words " certains détails de ce relief " in the French text the words " entre 10 et 20 mètres " should be inserted.

The President said that he took the third paragraph as an invitation to the I.H.B. to undertake a more exhaustive study of the question and put the third paragraph to the vote.

> 3. The Sub-Committee does not consider it necessary to establish a special line to represent each metre of depth between 20 and 50 metres, but it has found that it would be of interest, either for submarine navigation, or for fixing of position by sounding, to show some details of the relief between 10 and 20 metres by means of special contour lines which do not correspond to tens of metres. Moreover, admitting the principle that each country will only use those lines which seem to it the most convenient, no inconvenience can be caused by allowing for a greater number of symbols.

(*Adopted*).

The President stated that before taking the advice of the Conference with respect to the last paragraph of the Report he wished to point out that in his opinion this paragraph should also be considered an invitation to the I. H. B. to go into this question thoroughly.

He put the last paragraph to the vote together with the Table annexed thereto, subject to the understanding that, in accordance with the decision made by the Conference, the symbol of a line of dots for the 10 metre line of equal depth should be deleted from this table.

> After having adopted the above mentioned points, the Sub-Committee (1929) proposes that the Conference will deliver to to the Bureau these points and the new table of symbols for depth contours hereafter with recommendations. The Sub-Committee is anxious to emphasise that the above given proposals for depth contours must only be regarded as a recommendation for further study.

(*The last paragraph of the Sub-Committee's Report together with the table annexed thereto were adopted as amended*).

## *AMENDMENTS TO CERTAIN ARTICLES OF THE STATUTES.*

The President stated that the proposal relating to the amendments to the articles of the Statutes, which had been circulated, was supported by the Peruvian and the Japanese Delegates. He considered that this proposal should be discussed before taking up the examination of the Finance Committee's Report.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) reminded the Conference of the statement he had made yesterday and said he shared the President's conviction that it would have been possible

not to include the Secretary General among the personnel. There were nevertheless certain difficulties in the way of the proposed amendment.

To begin with, Chapter 6 was headed "Personnel" and yet was practically confined to the Secretary General. This title must, therefore, be changed. Should it be decided to amend the Statutes, a proceeding which was always of far reaching importance, since it might affect the organisation of the Bureau, he would take advantage of this step to request that in the first sentence of the Proposals submitted to the Conference the word "contrôle" in the French text should be replaced by the word "autorité." The proposed amendment to Article 27 should therefore read :

> "Le Secrétaire Général du Bureau est placé sous l'*autorité* du Comité de Direction."

In French the word "contrôler" means to check a task already done and by no means corresponds to the idea of direction. A director must give his orders before the work is carried out

CAPTAIN LUYMES (Netherlands) read the following statement:

"In 1926 the Statutes were completely revised by a large Committee which did serious work and devoted many meetings to it. One of the subjects which were discussed at great length was the position of the Secretary General in the Bureau. The proposal of the President goes still further than that of the Bureau in 1926, which reads :

> "The personnel shall consist of technical assistants to assist the Directors in their work *and administrative employees under a Secretary General.*"

"This proposal was rejected and nobody spoke in favour of it. I refer you to page 255 of the Report of the Proceedings of the 1926 Conference.

"I am still of the same opinion as in 1926, namely, that the Directing Committee must have complete authority and that, were the proposal accepted, there would be two authorities in the Bureau, which is undesirable. As to the organisation of the Retirement Fund, I think the difficulty will be solved by changing in the proposed Annex to Article 43 the words "staff with the exception of the Secretary General" to "the technical and administrative employees" in accordance with Article 32 of the Statutes."

THE PRESIDENT, replying to the observation by Capt. Luymes, stated that there would be a single authority only, and that the members present were sufficiently well acquainted with questions of organisation to understand that on board ship the Captain was the sole person responsible for what occurred.

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) stated that on behalf of the Directing Committee he could not agree that the Committee should be likened to an Admiral or a ship's Captain. An Admiral commanded a squadron and was surrounded by a staff. He did not have to deal with the detail work of each vessel in his squadron. This task was entrusted to the Captains in command of the various ships. If the Admiral, however, had only one ship under his orders his position with respect to the

ship's Captain became ambiguous. The Directing Committee was only in charge of one vessel, the Hydrographic Bureau. If it were deprived of its position with regard to the Bureau, he did not see what authority would remain to the Directing Committee.

Commander Bjorset (Norway) indicated that a comparison between the new draft of Article 27 and of Article 28 showed that the Secretary General would be under the direction of the Directing Committee whilst the technical and administrative employees would work under the orders of the Secretary General.

It appeared evident in these circumstances that the Directing Committee could co-operate in directing the work of the technical and administrative employees but that such co-operation would have to be with the Secretary General.

The President answered that in proposing the amendments his intention had not been to decrease the powers of the Directing Committee but to specify them more precisely.

Commodore Reinius (Sweden) saw no necessity for amending the Statutes. If it were desired to indicate that the Secretary General should not be included in the Retirement Fund this could be stated in the Articles governing that Fund.

Nevertheless, if it were decided to modify the Statutes, he requested that Article 26 should set forth that "the technical and administrative employees shall work under the orders of the Directing Committee and Secretary General."

The President said he was pleased to accept this suggestion and put it to the vote.

(*The amendment was adopted*).

Captain Claussen (Germany) said that in his opinion amendments to the Statutes should not be proposed during a Conference, since it was essential to give the questions close study before coming to a decision.

In the case under consideration, consequently, either the proposed amendments should be adopted together with Captain Luymes' observations, or else the question should be postponed to the next Conference.

Commander Rasikotsikas (Greece) (translation) agreed that important changes in the Statutes might endanger the smooth working of the Bureau. On these grounds he supported Captain Luymes' suggestion not to go further than a slight change in the Finance Committee's proposal.

Captain Baum (U. S. A.) declared that if the Statutes were not amended it would be impossible to create the Retirement Fund.

Captain Luymes (Netherlands) replied that certain amendments to the Statutes had already been adopted.

The President noted that his intentions in suggesting amendments to Articles 27 and 28 had been misunderstood. He would not insist upon his proposal but was glad that he had put it forward as he thought it would have the result of inducing some future Conference to lay down in exact

terms what was the actual situation of the Secretary General. He put to the vote a motion to postpone the question.

(*This motion was rejected*).

(*The Conference agreed to an immediate discussion*).

ING. HYDROGRAPHE EN CHEF COT (France) (translation) requested that in the French text the words " sous le contrôle de la direction " in Article 27 should be replaced by " sous l'autorité du Comité de Direction. "

THE PRESIDENT stated that he was all the more pleased to accept this change in the drafting, as it gave an exact rendering of the meaning of the English word " control. "

CAPTAIN LUYMES (Netherlands) recalled that in accordance with Article 64 the Statutes could only be amended with the approval of at least two-thirds of the Members.

THE PRESIDENT put to the vote the draft amendment to Article 27, which he had submitted to the Conference.

(*The requisite majority of two-thirds was not obtained*).

THE PRESIDENT said that in these circumstances the amendment to Article 28 would not be put to the vote.

## *REPORT OF THE FINANCE COMMITTEE.*

(*At the suggestion of the* PRESIDENT *the beginning of the report inclusive of sub-sections* a *and* b *of paragraph 2 was adopted.*)

THE PRESIDENT then opened the discussion on sub-section *c.*

c). With a view to putting it into immediate effect, the Committee had amended only certain items in the proposal submitted by the Bureau, whilst still considering as inadequate the advantages which the staff will receive therefrom. The Committee proposes to the Conference that the scheme as amended, which is annexed to the present report, should be put into immediate execution.

COMMODORE REINIUS (Sweden) asked to be informed whether the proposals relating to the Retirement Fund were on the same lines as those adopted for the staff of the League of Nations.

THE SECRETARY GENERAL replied that this had been found impossible as the Directing Committee and the League Secretariat had come to the conclusion it was impossible to organise a Retirement Fund for so small a staff as that of the Bureau on the same basis as that taken for the staff of the League, which amounts to nearly 800 members.

(*Sub-section* c. *was adopted*).

(*The meeting was suspended at* 10.30 *a.m.*)

H S.H. PRINCE PIERRE OF MONACO honoured the Conference with His presence and was greeted on His arrival by the PRESIDENT on behalf of all the Delegates.

(*The meeting was resumed at* 11 *a.m.*)

## 48a. Study of Oceanic Currents.

Captain Caballero y Lastres (Peru) made the following statement:

With reference to Proposal N° 48a, made by the International Hydrographic Bureau on the subject of the study of oceanic currents, in my capacity of Vice-President of the Ibero-American Oceanographic Council, which is an association of Spanish and Portuguese speaking States, I desire to state that, amongst other subjects, there is included in our work the study of the Humboldt Current which will be undertaken with the greatest interest.

As regards currents, we have already the intention to study not only this cold current which, on account of the changes in its direction and intensity since 1923, has caused climatic and navigational disturbances on the Eastern shore of the Pacific, but also the Equatorial counter-current and other currents.

In this connection, the Ibero-American Oceanographic Council will organise Committees for the Pacific, the Atlantic, the Gulf of Mexico and the Antarctic Sea.

But this work, as has been said by the President of the Directing Committee of the Bureau, the illustrious Admiral Niblack, is primarily an international problem and every organisation which in any way contributes to make navigation easier should cooperate in the study of oceanic currents.

The International Hydrographic Bureau is already a recognised institution to which all maritime nations, whose ships plough the seas, adhere and. in the same way as it is considered necessary to collate and to cause to be published by the International Hydrographic Bureau all oceanic soundings obtained by sound, so also the data relative to currents, which might be collected by Masters of vessels, should be collated and published.

Recently, those who are interested in such questions have been highly interested by reports made by some masters, which tend to indicate that the Gulf Stream has been turned aside and is flowing towards the west, instead of towards the east, in the area lying between 40° and 50° West Longitude.

I mention this case to indicate the importance of the work which is to be carried out and, in stating that the Ibero-American Council, which was recently founded at Madrid, will study the currents lying in the geographical areas which lie within its sphere, I propose that the Bureau shall contribute, with its high authority and prestige as an international organisation, to the systematic study of oceanic currents.

The general opinion of the International Hydrographic Conference of 1926 was that the work of the Bureau should not be restricted too much because of the encroachment of some questions over others, and that in the study of allied subjects, there should be the closest cooperation between the different international institutions.

In conformity with the opinion of the Second International Hydrographic Conference, Admiral Niblack issued a remarkable study in Special Publication N° 19 of Oceanic currents in relation to Oceanography, Marine-Biology, Meteorology and Hydrography.

In the Oceanographic Section of the International Geodetic and Geophysic Union, at its meeting at Prague in 1927, I had the opportunity of directing attention to this important work by Admiral Niblack and, in addition, I proposed that the study of currents should be undertaken.

The international organisation just mentioned took steps to cause work on this subject to be done, and it is necessary that the International Hydrographic Bureau should contribute also to the study of currents by suggesting to the Hydrographic Offices that they should indicate to seamen the value which lies in taking observations of currents and by collating and publishing them in the same way as is proposed by Sweden for soundings obtained by echo.

THE PRESIDENT informed the Conference that the United States Hydrographic Office had commissioned an expedition which was at present in the Gulf of Panama with the purpose of studying all the currents in that area, both surface and under water. A beginning had therefore been made to put into effect the recommendation of the Peruvian Delegate.

## *REPORT OF THE SUB-COMMITTEE ENTRUSTED WITH THE EXAMINATION OF QUESTIONS N$^{os}$ 24, 24$^{a}$ AND 29$^{a}$, RELATIVE TO AERIAL CHARTS.*

MR. ROPER (I. C. A. N.) thanked the I. H. B. for having invited a representative of the International Commission for Air Navigation to attend this Conference. He was particularly pleased to note the spirit which prevailed in the International Hydrographic Bureau.

The report before the Conference had been unanimously adopted by the special Sub-Committee appointed by the Committee on Charts.

The International Commission for Air Navigation had been studying this question since 1919. Up to now, however, more particular attention had been paid to land maps. The time was now approaching when oversea flights would become more and more frequent and would, perhaps, in a few years be the most important work of aviation. It was therefore advisable to prepare charts which would adequately meet the needs of air pilots flying over the seas. The advice of mariners on this subject would be of the greatest value. Fear of overlapping between the two organisations might have been entertained but he was glad to note that the spirit which prevailed in the I. H. B. rendered all such fears unnecessary. The I. H. B. had very wisely recognised the results already attained in the international charts in use and had agreed to deal specially with those charts for which its experience best fitted it. The advice of the I. H. B. would be of the highest utility for the work in which the International Commission for Aerial Navigation was engaged.

(*The Sub-Committee's proposal — underlined text at the end of the report — was adopted*).

> "*The Sub-Committee has solely considered the special coastal air-charts published by the Hydrographic Offices; the Sub-*

*Committee proposes to refer back to the International Hydrographic Bureau these various studies, the results of which will be communicated to the International Commission for Air Navigation (I.C.A.N).*

## *REPORT OF THE FINANCE COMMITTEE (Contd.).*

The President invited the Conference to discuss the section of the report headed "Retirement Fund."

Captain Claussen (Germany) thought there had been a misunderstanding with regard to the President's proposal for amending certain articles of the I.H.B. Statutes. The President's proposal was new and appeared only remotely connected with the question under examination by the Finance Committee.

The German Delegation had no objection in principle to offer and was in favour of adopting the Finance Committee's proposals.

H.E. Napier Tomlin Pasha (Egypt) observed that in the text before the Conference were to be found the words "personnel" and "staff." One might be led to the conclusion that the word "personnel" included the Secretary General as the formula "the personnel with the exception of the Secretary General" was also to be found. In order to prevent confusion he suggested that only the word "employees" be used.

This suggestion was seconded by Captains Luymes and Edgell.

The President noted that it was agreed that the expression "employees" did not include the Secretary General.

Captain Luymes (Netherlands) stated as his opinion that since the report of this debate would be included in the Minutes the word "employees" could not lead to any confusion and therefore seconded Tomlin Pasha's proposal.

The President put to the vote Tomlin Pasha's motion that the word "employees" should always be used when it was desired to indicate the persons in the employ of the I.H.B.

(*This proposal was adopted*).

(*Section a was adopted as amended*).

(*Section b. was approved without discussion*).

Section *c.*

The President drew the attention of the Committee to the five paragraphs composing this section and suggested that they should be examined separately.

Captain Baum (United States), Chairman of the Finance Committee, stated that in order to give the Delegates an idea of the scope of the proposal he had calculated the amounts which would be due to employees on leaving the service of the Bureau after a certain number of years, according to the following rates of interest : 5%, 4% and 3%.

The employee would receive :

| | | | | | | |
|---|---|---|---|---|---|---|
| At 5% | after | 10 | years' | service | a sum equal to 1 | years' salary. |
| " | | 20 | " | " | 2.1/4 | " |
| " | | 30 | " | " | 5 | " |
| At 4% | after | 10 | " | " | 1 | " |
| " | | 20 | " | " | 2 | " |
| " | | 30 | " | " | 4 | " |
| At 3% | after | 10 | " | " | 1 | " |
| " | | 20 | " | " | 1.9 | " |
| " | | 30 | " | " | 3.2/3 | " |

(*Section c. 1 was approved*).

(*Section c. 2, 3, 4 and 5 were approved without discussion*).

(*Section d. was approved without discussion*).

SECTION *e*.

*e*) A member of the staff who has left the Bureau and is reappointed shall be treated as a new member.

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) thought it right to point out that this provision was somewhat too favourable for employees who left the service of the Bureau after ten years and were re-engaged two or three years later. They would in fact receive more favourable treatment than employees who remained in the Bureau's service without interruption, since the Bureau, after having paid 10% of their salary for ten years, would recommence payments on this basis for re-engaged employees, whereas it would pay less for those whose work had not suffered any interruption.

The Bureau's proposals were slightly different. Perhaps the Committee had found them rather complicated.

In any case he thought that employees who left the service of the Bureau and returned later should not be favoured in comparison with those who had worked continuously.

CAPTAIN BAUM (U. S. A.) replied that the Committee had sought precisely to obviate the disadvantage pointed out by M. de Vanssay de Blavous by inserting section *e*. It had struck the Committee that the Bureau's proposals were unduly favourable in the case of an employee who left its service after, say, six or seven years and received between 60 and 70% of his annual salary and was subsequently reemployed.

CAPTAIN HOOYKAAS (Netherlands) added that on reflection neither of the cases submitted favoured the employees unduly. The employee who remained in the service of the Bureau without interruption received about 10% after ten years, since the Bureau paid 5% of the salary with compound interest into his account in the Fund. As regards the case of a re-engaged employee, who was treated as a new employee, he was entitled to a payment of 10%. There was no appreciable difference in practice ; it depended upon the rate of interest on the amounts paid into the Retirement Fund.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) said that he would not insist, the more so as such a case would most certainly only occur rarely.

(*Section e. was adopted without change*).

Section *f*.

*f*) On the date of the establishment of this Fund the amounts credited to the existing staff in accordance with Article 10, paragraph (*c*), clause III, of the present Regulations for the Office Staff (January 1928) shall be increased by such amounts as may be necessary to bring them up to the total they would have reached if the Bureau had effected a deposit of 10% of the annual salary paid to every member of the staff since he joined the Bureau.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) suggested an addition to this clause to the effect that this provision would not be applicable to employees who had already left the service of the Bureau. This was, he thought, the intention of the Conference.

The President drew the attention of the Conference to the words "existing staff" which appeared to lay down that only the employees at present in the service of the Bureau were meant.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) recommended that the French text of this clause should be redrafted and read: "the *present* existing staff."

(*Section f. was adopted as amended by M. de Vanssay de Blavous*).

(*Sections g. and h. were adopted without discussion*).

The President invited the Delegates to discuss Section *e.* of the Report of the Finance Committee.

Captain Baum (U. S. A.) said that he was desirous of bringing this text into line with the decision of the Conference to replace the words "the staff with the exception of the Secretary General" with the words "the employees", and thought that the same amendment should apply to Paragraph I *h*.

The President stated that he had understood the Conference had already decided that this change should be made throughout the document and in the additions to be inserted in the Statutes.

He pointed out that the first paragraph of *e.* laid down a principle which the Conference might accept or reject.

(*The first paragraph of e. was approved*).

Paragraph I. *h*.

The President drew attention to the fact that the paragraph was meant as a supplement to follow Article 43 *g*) of the Statutes.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) pointed out two passages which affected a legal guarantee :

" I. h. They (the sums set aside for the constitution of this Fund) may not be subject to seizure by any creditor who is not an employee of the Bureau, nor be deposited with such person as security."

" II. (1) The rights of the employees with respect to the assets of the Bureau shall be privileged."

He asked if the Conference could indeed insert such provisions in the Statutes in view of the effect in practice which they implied.

THE PRESIDENT stated that in his opinion this text would always be binding as regards the International Hydrographic Bureau itself since it would be an expression of the will of the Conference and the States Members.

(*Paragraph I. h. was adopted unchanged*).

PARAGRAPH II. (1).

THE PRESIDENT indicated that the proposed addition referred to Article 63 of the Statutes.

(*The paragraph was approved without discussion*).

## *COMMUNICATION BY THE PRESIDENT.*

THE PRESIDENT informed the Conference that H.S.H. Prince Pierre of Monaco had kindly consented to be photographed with the members of the Conference and that the meeting would rise at once.

The President thanked Mr. Roper, Secretary of the International Commission for Aerial Navigation, for his valuable co-operation in the work of the Conference.

The next meeting would be held to-morrow at 9 a.m.

(The Conference rose at noon).

# 9th PLENARY SESSION.

(19th April 1929)

## MORNING SESSION.

The Meeting opened at 9 a.m., with the President, Rear-Admiral W.S. Crosley (U.S.A.) in the Chair.

### *ADOPTION OF THE MINUTES OF THE LAST MEETING.*

Captain Luymes (Netherlands) rose to draw the particular attention of the Conference to a statement by the President reported on page 5, paragraph 5, which read :

> "He would not insist upon his proposal but was glad that he had put it forward as he thought it would have the result of inducing *the next* (instead of a future) Conference to lay down in exact terms what was the actual situation of the Secretary General."

Captain Luymes added that the Minutes continued :

"He put to the vote a motion to postpone the question."

"This motion was rejected."

At the bottom of the same page, the President was reported as having said that in these circumstances the amendment to Article 28 would not be put to the vote *and consequently the whole question would be postponed to the next Conference.*

Captain Luymes was under the impression that this statement was contrary to the decision made by the Conference.

The President, in reply to Captain Luymes, observed that the Minutes would have been clearer if after the words "The requisite majority of two-thirds was not obtained" they had given the number of votes, which, if he trusted his memory, were 11 for the adoption and 3 against.

The President considered that when a question was put to the vote and did not give a definite result one way or the other it should automatically come back to the Bureau, which would put it on the Agenda of the next Conference.

Following this observation by the President, Captain Luymes declared that this was not stated in the Statutes of the I.H.B.

The President replied that this was often the case with many decisions made by the Conference.

CAPTAIN LUYMES (Netherlands) declared that a vote of 11 to 3 is not a close vote when the requisite majority is two-thirds.

In reply to the President's remark that many decisions are not embodied in the Statutes, he did not think this was exact where matters of principle were concerned. Such was the case in question and he suggested, therefore, that the President's statement at the bottom of page 5 should end with the word "vote", the remainder of the sentence, "and consequently," etc., to be deleted.

THE PRESIDENT accepted Captain Luymes' suggestion, but pointed out that this method had been adopted at the last Conference to avoid imposing unnecessary labour on the States Members who wished to place questions on the Agenda of a Conference.

He himself seconded the motion submitted by Captain Luymes that the statement from the Chair should read as follows :

> "THE PRESIDENT said that in these circumstances the amendments to Article 28 would not be put to the vote."

(*Adopted*).

(*The Minutes of the eighth Plenary Meeting as now amended were adopted*).

(*The Conference resumed the discussion of the Agenda*).

## 48a. Study of Oceanic Currents.

THE PRESIDENT stated that for reasons known to all the Delegates it had been impossible to take up this question yesterday, and drew the attention of the Conference to a proposal on page 10 of the Supplement, which he suggested should be amended as follows :

> "That the Conference, acting through the agency of the International Hydrographic Bureau, suggest to," *etc...*

CAPTAIN HOOYKAAS (Netherlands) pointed out that this question had been discussed by the Committee on Documents and requested the Delegates to refer to the last paragraph of that Committee's report.

THE PRESIDENT stated that he had not been able to examine this report carefully, but a perusal would seem to show that the subject had already been dealt with and consequently there was no need to go into it now.

CAPTAIN CABALLERO Y LASTRES (Peru) (translation) declared that the Committee on the Work of the Bureau had gone into this question thoroughly at yesterday's meeting and had recommended that the Bureau should be instructed to study the currents from the point of view of navigation. These currents include the Humboldt current, an investigation into which should, it was suggested, be undertaken by the Ibero-American Oceanographic Council. The work, however, should be made to comprise all the other currents.

CAPTAIN LUYMES (Netherlands) stated, as Chairman of the Committee on the Work of the Bureau, that it was true that this question had been debated at yesterday's meeting of the Committee at the suggestion of the

Peruvian Delegate. The Committee, however, had come to the conclusion that this subject was not within its province and confined itself to reporting on Special Publication N° 19, " Ocean Currents. " The Committee decided as follows :

> " The Committee is in agreement with the decision expressed by the second Conference, but approves Publication N° 19 in so far as it treats of those aspects of oceanic currents which directly concern navigation. "

It was, therefore, not correct to say that the Committee had proposed that the Conference should in a general way instruct the Bureau to study the currents from the point of view of navigation.

He wished to make it quite precise that the Committee had not opposed the suggestion but had merely come to the conclusion that the question was outside its scope.

H.E. Napier Tomlin Pasha (Egypt) supported Captain Luymes' remark. The question of the Humboldt current had not been discussed by the Committee.

Captain Caballero y Lastres (Peru) (translation) repeated the statement he had made yesterday, " that the Consejo Oceanográfico Ibero-Americano " accepted the suggestion that had been made to it. " This organisation not only studied the Humboldt current, but all other currents as well.

The President understood that the present discussion really bore on the question of deciding whether the I.H.B. should be entrusted with the study of currents in so far as it related to navigation. The President had only lately travelled in the vicinity of Panama. He had been struck by the great number of vessels of many Nations which went through the Canal and navigated along the western coast of South America. The question of deciding whether the Humboldt current should be studied or not was similar to that which would arise in connection with the Gulf Stream if that were also little known.

H.E. Napier Tomlin Pasha (Egypt) considered that these questions were not within the scope of the I.H.B.

The President thought that everybody would agree that the I.H.B. could not study the Humboldt current nor any other current, but that it should in every possible way encourage other organisations to do so.

Captain Caballero y Lastres (Peru) (translation) observed that as one of the aims of the Conference was to facilitate navigation the I.H.B. should contribute to the study of currents. In a case of thick fog, even though he were provided with the best charts, what could a ship's captain do when he found himself in the vicinity of a little known current on which he had no information ? Charts were no use without information.

Captain Luymes (Netherlands) submitted that the Committee on the Work of the Bureau did not take up an attitude against the study of the currents. It had simply decided that the question should be discussed by the Plenary Session.

He himself thought that the currents should be studied from the hydrographic point of view, but not as regards oceanography, biology, etc...

CAPTAIN CABALLERO Y LASTRES (Peru) (translation) pointed out that it was not only a matter of Special Publication N° 19, but of the study of the currents in so far as they affect navigation.

THE PRESIDENT noted that the proposal before the members was that the Conference expressed the opinion that the I.H.B. should encourage the study of the currents in so far as they concerned hydrography and consequently navigation.

LIEUTENANT-COMMANDER LOPES (Portugal), REAR-ADMIRAL HERRERO (Spain) and COMMODORE REINIUS (Sweden) supported this proposal.

(*The proposal was adopted*).

## *REPORT OF THE CHARTS COMMITTEE.*

THE PRESIDENT invited the Conference to examine the proposals contained in the above report.

### 2. International Uniformity of Symbols used on all Hydrographic Charts.

(*Paragraph 1 was adopted*).

> " It was agreed that further discussion should not be given to the symbols under N°s 1 to 25 (pages 8 and 9 of the Proposals) since they had been definitely approved by the London Conference 1919. "

THE PRESIDENT reminded the Conference that the United States Delegation was handicapped by the decision of the U. S. Inter-Departmental Board with regard to symbols.

PARAGRAPH 2.

> " The Committee proposes to the Conference to adopt the following symbols as suggested by the International Hydrographic Bureau (see second list, pages 9, 10 and 11 of the Proposals 1929) : "

COMMANDER BJORSET (Norway) pointed out that if new symbols were to be put on charts already published, it would entail great expenditure. On the other hand, if new symbols were used on new charts only it would mean that many years would elapse before uniformity of symbols was attained. He was therefore of opinion that symbols should be adopted, not only for new charts, but also for new editions of existing charts.

CAPTAIN HOOYKAAS (Netherlands) declared that as far as the Dutch Hydrographic Service was concerned, it was taken for granted that the

decisions made by the Conference would be applied to all new charts. Little by little they would be inserted on all the charts issued by the Dutch Hydrographic Service.

The President stated that the decisions of the Conference would not impose impossible obligations on States Members. It was a material and financial impossibility to correct all existing charts. The President had the impression that everyone agreed with Captain Hooykaas.

**Symbol 1. MINES, QUARRIES.** (*Adopted*).

**Symbol 3. FERRY.** (*Adopted*).

**Symbol 4. CHURCH.**

Captain Luymes (Netherlands) would like churches also to be shown in elevation on charts. Further, it seemed to him that the number of symbols proposed for temples, pagodas, mosques, minarets and marabouts could be cut down.

Captain Edgell (Great Britain) thought that the observation under N° 16 on page 9 of the Proposals ("they will be drawn on the chart showing the appearance as visible from seaward") would meet Captain Luymes' wish as expressed in his first remark.

The President proposed that this observation should be placed at the head of this Chapter.

(*The President's proposal was adopted*).

(*Symbol 4 was adopted*).

**Symbol 5. TEMPLE, PAGODA.**

Captain Edgell (Great Britain) pointed out that the diagonals in the first symbol should be extended outside the rectangle.

The President recalled Captain Luymes' observation with regard to the number of symbols under this and the following items.

Captain Edgell (Great Britain) proposed that only the first symbol under item 5 should be retained.

(*This motion was adopted*).

**Symbol 6. MOSQUE, MINARET, MARABOUT.**

Captain Edgell (Great Britain) submitted that only one of the first two symbols should be retained.

Captain Luymes (Netherlands) was in favour of this proposal and suggested that the second of the first two symbols should be retained.

Ing. Hydrographe en Chef Cot (France) (translation) held that the third symbol, representing a marabout, was a useful sign and should be kept.

(*The Conference adopted the second symbol*

 *for mosques and minarets*

*and the third symbol*  *for marabouts*).

**Symbol 7. WINDMILL.**

CAPTAIN EDGELL (Great Britain) pointed out that the second symbol should be drawn the other way round.



CAPTAIN HOOYKAAS (Netherlands) preferred that in general drawings in elevation should be used instead of symbols.

CAPTAIN CLAUSSEN (Germany) suggested that the symbol should be drawn with the wings rather lower.



(*This suggestion was adopted*).

THE PRESIDENT put symbols N°s 9 to 14 to the vote in succession.

(*Adopted*).

**Symbol 15. COURSE OR CHANNEL RECOMMENDED.** (*Adopted*).

**Symbol 16. ICE LIMIT.** (*Adopted*).

**Symbol 17. ANY KIND OF STATION (fixed).**

THE PRESIDENT suggested that the above item should read as follows: "any kind of station (fixed position)", the word "position" being inserted to define the meaning more exactly.

(*Adopted as amended*).

(*Symbols 21, 27, 28 and 8 were adopted*).

**Symbols 18, 19 and 20.**

THE PRESIDENT invited comments from the Delegates on the following paragraph from the words "The Committee did not oppose the three symbols given by the I.H.B. under N° 18" to "... appropriate legend would best suit the requirements of seamen."

He pointed out that the Committee had confined itself to an expression of opinion.

CAPTAIN LUYMES (Netherlands) saw no substantial difference between a semaphore station, signal station and telegraph station and consequently proposed that these three kinds of stations should be represented by symbol N° 17, modified as shown below.



COMMANDER PARKER (U.S.A.) opposed this suggestion and thought in reality these three kinds of stations were quite different ; if they were always shown by the same signs confusion would result for seamen. He was nevertheless prepared to accept symbol 17 on condition that it was always accompanied by an appropriate legend.

COMMANDER BJORSET (Norway) agreed.

The President thought it necessary to point out that it was essential for a navigator to know how he could communicate with a station and explained that a semaphore was a station with which a mariner could communicate by means of arm signals ; he could communicate with a signal station with flags and finally a telegraph station was one from which the navigator could send a telegram.

He put to the vote a proposal to adopt symbol 17 for all kinds of stations with an appropriate legend showing the precise nature of the station in accordance with Commander Parker's amendment.

(*The Committee's proposal, thus amended, was adopted*).

The President drew the attention of the Conference to the fact that in the following paragraph, beginning with the words : " Concerning N° 22, Fixed beacons," the Committee had expressed a recommendation which amounted to a proposal.

Commodore Reinius (Sweden) declared that there were thousands of floating beacons in Swedish waters and it would be materially impossible to show them by a sloped line. He would like the first paragraph of page 3 to terminate with the words : " whenever possible. "

Commander Bjorset (Norway) and Captain Edgell (Great Britain) supported this amendment.

The President put the amendment submitted by Commodore Reinius to the vote.

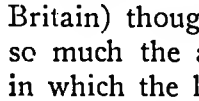
(*This amendment was adopted*).

(*The Committee's text, thus amended, was adopted up to N° 25 — not inclusive*).

**Symbol 25. LIGHT BUOYS.**

Captain Luymes (Netherlands) called attention to the fact that this proposal was contrary to the regulation adopted by the London Conference, which stated that buoys should be represented in elevation. As there were several types of buoys — conical, spherical, etc., — he asked why the shape of these buoys was not taken into account in choosing the symbol.

Captain Edgell (Great Britain) thought that what the Committee had meant to suggest was not so much the adoption of a symbol for all types of buoys, but the manner in which the light should be indicated. One of the following symbols could be used to indicate buoys of different shapes :



The President put the proposal to the vote.

(*Adopted*).

**Symbol 26. LIGHT VESSELS WITH SUBMARINE BELL.** (*Adopted*).

**Symbol 2. OBSERVATION SPOT.** (*Adopted*).

## 12a. Translation of Title of Charts.

THE SECRETARY GENERAL stated that the word "symbole" in the French text should be replaced by the word "proposition." The sentence should read: "La Commission est d'avis d'adopter la proposition faite par le Bureau Hydrographique International."

(*This new text was adopted*).

## 15. Scale of Charts.

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) proposed that for the sake of clearness the following should be inserted after the words "Mercator's projection" : "It is recommended that the latitude on which the scale of the chart is calculated should be indicated."

ING. HYDROGRAPHE EN CHEF COT (France) (translation) explained that this correction was only applicable to the French text as this recommendation had been drafted in accordance with the custom of other countries. The idea was the same but was not expressed in the same way in French as in other languages.

(*It was agreed that the text should be corrected in accordance with the amendment proposed by M. de Vanssay de Blavous*).

CAPTAIN LUYMES (Netherlands) recalled that it had been the intention of the Charts Committee to propose that the latitude on which the scale was based should be mentioned on the charts in addition to the requirements stated in the text.

THE SECRETARY GENERAL gave the English translation of the words : "à quelle latitude se rapporte cette échelle." This would be added at the end of proposal 15.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) noted that this meant a change in the rule requiring the scale of the middle latitude of the chart, and that henceforth a fixed scale and parallel would be required.

(*Adopted*).

## 16. Insertion of Meridians and Parallels on Charts.

(*Adopted*).

## 16a. True Compass Roses.

THE PRESIDENT suggested that this proposal should be taken a paragraph at a time.

(*Paragraph 1 was adopted*).

It was proposed that the International Hydrographic Bureau should inform those States which had not yet adopted the resolution made in London in 1919 that the present Conference would be glad to see them conform thereto.

(*The quoted text was also adopted.*)

" It is suggested that those countries which do not show a true compass rose on their charts should issue to seamen such roses printed on thin transparent paper, which can be stuck on to their charts. "

## 19. Indication on Charts of the Direction of the Buoyage of Channels.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) proposed that the word " conclusive " in the last paragraph should be replaced by the word " necessary. "

The Secretary General, in order that the French text should be brought into line with the English text, recommended the expression : " renseignements précis ", as all information was by no means always definite.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) accepted this expression.

The President explained that the text on which the Conference must vote was as follows :

" When the scale permits, and when the intricacies of the channel require it, a note conspicuouslly placed on the chart, shall give definite information on the system (direction) of buoyage used. "

(*This proposal was adopted*).

## 44. Use of the International Ellipsoid.

The Secretary General called attention to an error in the numbering in the French text. It should be " 44 " and not " 24 ".

(*This proposal was adopted*).

## 45. Adoption of a Uniform Length for the Sea Mile.

Captain Hooykaas (Netherlands) asked why a uniform length for the sea mile was suggested. He thought that the intention of the Conference was that all countries should adopt the same sea mile and there should not be a different international sea mile.

The Secretary General recalled that certain countries had still got a national length for the sea mile, and he thought that it would take a certain amount of time for a uniform length of the sea mile to be adopted everywhere.

Till the time when this uniformity could be attained it would be necessary, provisionally, and especially when indicating long distances, to

state clearly whether they were indicated in international sea miles or only in sea miles, which last would imply national sea miles.

CAPTAIN HOOYKAAS (Netherlands) declared that this was how he understood the question and expressed the hope that everyone would, after a reasonable lapse of time, adopt the uniform length of 1852 metres for the sea mile.

THE PRESIDENT suggested that the text be amended by the deletion of the word " called. " It would then read :

> " The length represented by 1852 times that of the international prototype of the metre shall be the international sea mile. "

CAPTAIN EDGELL (Great Britain) foresaw the great expense which the immediate application of the international sea mile would entail for his government. This was the reason which kept him from accepting the proposal submitted by the Committee.

THE PRESIDENT expressed the same opinion as regards the United States.

(*The proposal was adopted.*)

## 6. Symbols to denote compulsory seaplane landing-places on marine charts and some other matters concerning Aeronautics.

CAPTAIN EDGELL (Great Britain) moved the deletion of the words " wherever possible " in the second line of the Bureau's proposal.

THE PRESIDENT put the following draft to the vote :

> " The Bureau proposes that a pair of wings be added to these symbols on marine charts whenever it would appear advantageous to indicate that these objects are reserved for aircraft. "

(*Adopted*).

## 8. Various Limits.

1. LIMITS OF FISHING ZONES. (*Adopted*).

2. LIMITS OF AIR PORTS. (*Adopted*).

3. MARITIME LIMITS IN GENERAL.

COMMODORE REINIUS (Sweden) submitted a remark which referred to the English text.

(*Adopted*).

THE PRESIDENT invited discussion on the second part of N° 8 beginning with the words : " The Committee recommends the adoption of three symbols... " which referred to the frontiers of countries, limits of territorial waters, custom frontiers and limits of ports and roadsteads.

Captain Edgell (Great Britain) observed that this proposal was due to the German Delegation which had first designated under the term : "limits of sovereignty" the limits which are at present included under the expression "limits of territorial waters." As this question gave rise to a conflict of views he had no authority to discuss it in the name of his Government. He preferred the term "limits of sovereignty" which occurred in the initial German proposal.

H.E. Napier Tomlin Pasha (Egypt) saw no objection to the adoption of these symbols as there was no question of notifying the different countries where they should be placed.

The President drew the attention of the Conference to Article 7b of the Statutes which reads as follows :

> "It (The International Hydrographic Bureau) shall never deal with any subject which involves questions of international policy."

Commander Kurze (Germany) and Commodore Reinius (Sweden) recalled that the Committee on Charts in its investigation into this question had entirely refrained from discussing the possible political aspect of the matter.

As a Conference was to meet shortly for the purpose of fixing and defining the limits in question, it would be advisable to adopt certain symbols beforehand, so that the Conference should be in a position to use them if it decided that the limits it fixed were to be inserted on the charts.

If, on the other hand, it did not have at its disposal a symbol agreed upon by the Hydrographic Conference it might choose signs which could not be inserted on all charts.

(*The proposal was adopted*).

## 22. Method of Insertion of Echo-Soundings on Charts. Adoption of a Standard Velocity for the Propagation of Sound in Sea Water.

(*Adopted*).

## 23. Collation and Publication by the International Hydrographic Bureau of all Oceanic Soundings. General Bathymetric Chart of the Oceans. Method of recording Echo-Soundings.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) said that he would like to take opportunity of conveying his thanks to the Japanese Hydrographic Office for a large consignment of charts which would greatly facilitate the task of recording soundings.

Captain Luymes (Netherlands) remarked that if the proposal under N° 23 were approved and the I.H.B. had consequently to keep a bathymetric chart up-to-date, it would have to collate not only the echo-soundings but also lead line soundings. He suggested, therefore, that the words " obtained by echo " in the title be deleted.

The President replied that the Conference was not called upon to approve or disapprove of a title and that the debate referred exclusively to the proposal submitted by the Committee. Moreover, the text under discussion contained the expression " all oceanic soundings " and did not only refer to echo-soundings.

(*Paragraph 1 was adopted*).

" that the International Hydrographic Bureau is to be entrusted with the collation of information concerning all soundings taken outside of the continental shelves. "

Paragraph 2.

" that the Bureau be charged with the keeping up to date of the General Bathymetric Chart of the Oceans, of which the "Cabinet Scientifique du Prince Albert de Monaco " has just drawn up the second edition. "

The President invited the Delegates to read the comments which followed immediately upon proposal N° 2.

(*Paragraph 2 was adopted*).

Paragraph 3.

(*Method of recording Echo-Soundings*).

The Secretary General, with the consent of the President, announced that the text of the second part of paragraph 3 should read as follows :

" A note is to be added at the foot of the form, Annex II, stating that additional data, such as surface salinity, density, temperature, *etc.*, if available, will be useful. "

(*Proposal 3 was adopted as amended*).

## 24. Aeronautical Charts. Coastal Charts to be used in Air Navigation published by Hydrographic Offices.

The President understood that this question had been examined at yesterday's meeting.

(*Agreed*).

Commodore Reinius (Sweden) rose to explain that he had forgotten to submit a point to the Charts Committee which, with the President's permission, he would now like to lay before the Plenary Session. Last summer a number of persons enquired of him the route for proceeding to the Olympic Games at Amsterdam by the German and Dutch canals. He had

carefully examined the charts and Sailing Dierctions and although he had found a certain amount of information this did not appear to him to be adequate.

There were certain publications which gave details concerning the canals but the majority of people did not know where these could be obtained, nor, for that matter, what publications should be applied for.

He submitted, therefore, that a note be inserted in a conspicuous place on charts and in Sailing Directions to the effect that information concerning the canals referred to was to be found in certain publications, a list of which could be given.

Ing. Hydrographe en Chef Cot (France) and Commander Bjorset (Norway) were in favour of this proposal.

Captain Edgell (Great Britain) said that he would be glad to hear the opinion of Captain Luymes on the question which had been raised.

Captain Luymes (Netherlands) stated that he had just conferred with Captain Hooykaas on this matter and noted that they themselves were not of the same opinion.

There existed in Holland a very complete publication called "the Canal Pilot." Foreign yachtsmen did not know of it, or if they happened to do so, they would not read it on account of its being written in Dutch.

Captain Luymes thought that there were many arguments in favour of Commodore Reinius' proposal. However, he should prefer to go into the matter more thoroughly before giving an opinion.

The President declared that Commodore Reinius' proposal should be drafted in order to give the Delegates ample opportunity of forming an opinion. It would come on to-morrow's Agenda.

## *COMMUNICATIONS BY THE SECRETARY GENERAL.*

The Secretary General announced that some of the people who had exhibited hydrographic instruments were holding them at the disposal of the Delegates before or after the Plenary Session this afternoon. These people wished to pack up and return their instruments as soon as possible.

As regards the ceremony of the laying of the foundation stone of the International Hydrographic Bureau, a certain number of seats would be placed at the disposal of the Delegates and of members of their families they wished to bring with them.

The Plenary Session would continue this afternoon at 2.30.

(The session was suspended at noon).

## AFTERNOON SESSION.

The session was reopened at 2.30 p.m.

### 55. Date of next periodical Conference.

THE PRESIDENT read the following proposal, made by the Delegation of the Argentine, and supported by the Delegations of Spain, Portugal and Peru :

> " Considering that under Article 49 of the Statutes of the International Hydrographic Bureau, regular Conferences meet, as a general rule, every five years, it would be advisable to decide now on what date the next Conference will be convened. "
>
> " The season was chosen for the present Conference on account of the greater facilities it presented for the Delegates from distant countries, and also because it is easier to find suitable accommodation in hotels at the end of the season. The same season would seem very suitable for the meeting of the next regular Conference.
>
> " It is therefore proposed that the next regular Conference should meet about 10 days after Easter, 1932, which falls on March 27th. "

(*The Conference agreed to discuss the proposal as a matter of urgency*)
(*The proposal was adopted*).

*REPORT OF THE DOCUMENTS COMMITTEE.*

THE PRESIDENT invited the Conference to consider the various proposals put forward in the Report of the Documents Committee.

### 29. Notation for distinguishing the characteristics of Lights.

PARAGRAPH *a*).

> *a*) That the diagram representing the whole of the successive phases which the light presents during its period be entitled " Physiognomy of the Characteristics. "

CAPTAIN LUYMES (Netherlands) pointed out that a table of all the physiognomies of Lights would be complicated as well as difficult for the mariner to use. It would be better to put in his hands as simple a catalogue as possible.

Captain Luymes was under the impression that the nine divisions which have been so far employed, were nearer the practical result for which

the Conference was striving. He was therefore opposed to the adoption of paragraph *a*.

Commander Bjorset (Norway), Commodore Reinius (Sweden) and Lieutenant-Commander Luisoni (Argentine) supported Captain Luymes' objection.

(*Paragraph* a) *was put to the vote and rejected by 9 votes to 4*).

Paragraph *b*).

*b*) " that the International Hydrographic Bureau be requested to compile a table of all the existing " physiognomies " and that each type be denoted by a number. "

The President opened the discussion on paragraph *b*) as amended and approved by the Committee. He emphasised the fact that it was now a different text to that inserted in the book of " Proposals. "

(*Paragraph b*) *was rejected by 10 votes to 4*).

Paragraph *c*).

*c*) " that the abbreviations of the characteristics indicated in the Lights Lists be supplemented by the number in the above table corresponding to the " physiognomy. "

The President opened the discussion on this paragraph, as amended and approved by the Committee.

(*Paragraph c*) *was rejected by 10 votes to 4*).

## 31a. International Code Book of Signals.

The President opened the discussion on N° 31 of the Proposals, modified by N° 31a of the " Supplement to the Proposals. "

He suggested the examination of the different lists one by one, following the order in which they appeared in original proposal N° 31.

Captain Hooykaas (Netherlands) said that this was rather a question of principle. He pointed out that the intention of the proposal of the Committee was not to encroach on the publications which came normally within the scope of the National Hydrographic Services

The President understood that Captain Hooykaas had meant to make clear that the International Hydrographic Bureau should not publish lists which are already issued by the national Services.

(*As thus interpreted, the proposal read by the President was adopted by 8 votes.*)

The President noted the principle decided upon and passed to the second proposal on page 2 relative to the list of Life Saving Stations. He observed that the Committee proposed that the list of Life Saving Stations should be continued and kept up-to-date by the International Hydrographic Bureau.

(*The proposal was adopted by 10 votes to 4*).

THE PRESIDENT said that this decision reminded him of a long debate which took place during the 1926 Conference, as a consequence of which it was agreed that the work of the I.H.B. should not be restricted by the decisions of the Hydrographic Conference or the States Members as to what they considered useful or otherwise. Personally, he thought that any publication likely to be helpful to any of the Hydrographic Offices or to the seaman was useful. He would, however, be glad to hear the view of the other Delegates.

H.E. NAPIER TOMLIN PASHA (Egypt) entirely agreed with the President, but thought that the question of economy should not be lost sight of. The work of the Bureau was increasing every year, and at this rate it would soon be necessary to enlarge the staff, which might lead to an increase in the contributions of the States Members. An application in that direction would not be well received in Egypt.

THE PRESIDENT stated that he understood it to be the intention of the International Hydrographic Bureau, acting on the supposition that some of the States Members published a list of time signals, to issue a general list. He drew attention to the rapidity with which these signals were being abolished. They no longer existed in the United States where their use had almost entirely been replaced by wireless stations. It would appear that these signals were still given to a certain extent in other countries. However that might be, if a general list of these signals were prepared, he was certain that subsequent changes would consist of omissions and not additions. He invited the Delegates to give their views on this point.

CAPTAIN EDGELL (Great Britain) replied that Great Britain published a list of visual time signals in her List of Lights. There were only a few of these signals and they would probably gradually disappear. He did not think it advisable to publish a list other than the one under discussion.

CAPTAIN HOOYKAAS (Netherlands) remarked that the President had endeavoured to lay down what publications were "useful." He thought that the vote just taken was an indication of the opinion of the Conference as to the significance of that which it considered useful.

THE PRESIDENT noted that the members of the Conference were apparently not all in agreement with the resolution just adopted. He would like to be perfectly clear on that point.

It had been decided that the International Hydrographic Bureau should refrain from printing lists which were already included among the publications of the national Hydrographic Offices. He did not think that all these Offices published a list of time signals.

CAPTAIN HOOYKAAS (Netherlands) thought that the resolution would be clearer if, instead of the word 'list' the word 'information' were inserted.

THE PRESIDENT declared that the proposal before the Conference was to substitute the word "data" for the word "lists."

CAPTAIN EDGELL (Great Britain) seconded this motion.

THE SECRETARY GENERAL stated in reply to a question by Captain Hooykaas that the word "lists" did not occur in the Committee's report,

but was to be found in the text of the resolution just adopted. This resolution read as follows :

> " The International Hydrographic Bureau shall not publish lists which have already been published by the national Hydrographic Offices. "

It was in this text that, according to the suggestion made, the word " data " should be substituted for the word " lists. "

Captain Edgell (Great Britain) submitted the following draft :

> " The International Hydrographic Bureau shall not publish lists of information already included among the publications of the national Hydrographic Offices. "

The Secretary General thought the following draft preferable :

> " In principle the International Hydrographic Bureau shall not publish lists of data which have already been published by national Hydrographic Offices. "

(*The President noted that no objections were offered to this draft and ruled that it should replace the resolution previously agreed to*).

## 33a. Notices to Mariners. - Summer time.

The President observed that the Committee recommended the adoption of the Bureau's proposal.

(*This proposal was adopted, no vote being recorded against it*).

## 36b. Mention of original charts in Notices to Mariners.

The President put to the vote the Committee's recommendation to postpone this question to the next Conference.

(*This proposal was adopted, no vote being recorded against it*).

## 40. Overlapping of Hydrographic Publications.

The President put to the vote the Bureau's proposal, which the Committee recommended should be adopted.

(*This proposal was adopted, no vote being recorded against it*).

## 41. Non-Official Publications.

The President suggested that the paragraphs of this article should be taken separately and invited discussion on paragraph (*a*).

> *a*) That Hydrographic Offices should warn seamen against non-official publications for navigational purposes and endeavour to bring about the use of official publications, as these only are corrected up to the date of their sale and while they are in use by means of lists of corrections.

Speaking as the UNITED STATES DELEGATE, he asked how the suggestion to warn mariners against these publications could be put into effect.

CAPTAIN LUYMES (Netherlands) gave as an instance what was done in Holland. The Royal Netherlands Meteorological Institute has branches at Rotterdam and Amsterdam that specialised in work for shipping. Amongst other work they correct charts and Sailing Directions for many ships by subscription, so that Masters brought their charts on arrival and got them back, fully corrected, when leaving port.

The Amsterdam establishment refused to correct unofficial charts, whereas the Rotterdam branch agreed to do so but, at the same time, advised the masters not to use these publications.

Further, in case of an accident, the National Marine Board enquired among other matters whether the accident was due to the use of non-official charts or documents. If that were the case action was taken against the mariner for neglect in the execution of his duty.

CAPTAIN EDGELL (Great Britain) explained the difficulties experienced in Great Britain in this matter. If he felt constrained to vote against the adoption of paragraph (*a*), it was not because he did not approve of the principle involved, but because he did not see how effect could be given to it. It was a very complicated question, which had to be considered from the angle of custom, copyright, etc...

The Departments concerned in Great Britain did their best to discourage mariners from using non-official charts, but it frequently occurred that "blue backs" were far cheaper than the set of Admiralty charts which would be necessary to replace them.

THE PRESIDENT noted that none of the other Delegates had asked to speak, and put paragraph (*a*) to the vote.

(*This paragraph was adopted*).

PARAGRAPH *b*).

*b*) Hydrographic Offices should further endeavour to bring before their National Marine Board the question of taking action within their jurisdiction against captains of ships who get into difficulty through using unauthorized publications for navigating.

THE PRESIDENT observed that the Committee had not come to any agreement on this question. Four Delegates had voted for and four against. Such a suggestion would not lead to much in the United States.

(*Paragraph* (b) *was adopted by 5 votes to 1*).

PARAGRAPH *c*).

*c*) An international agreement should be made for the suppression of the sale of such unofficial publications.

(*In conformity with the decision of the Committee, this paragraph was rejected*).

## 42. Dissemination of nautical information.

(*In conformity with the recommendation of the Committee, this proposal was adopted*).

## 43. Unification of the International Notations for Latitudes, Longitudes, etc...

(*In conformity with the recommendation of the Committee, this proposal was rejected*).

## 46. Geographical terms used on charts and in Sailing Directions.

(*In conformity with the recommendation of the Committee, this proposal was rejected*).

## 47. Standardisation of luminous Time-Signals.

The President stated that the discussion was not on the text as shown in the " Proposals ", but on that given in the Report of the Documents Committee.

> " Five minutes before the hour indicated the lamps shall be lit and the signal shall end at the hour indicated. The instant of extinction constitutes the time signal itself.
>
> " In consequence the warning signal, made by lighting of the lamps, is given 5 minutes before the time indicated. The signal should be made at least three times per diem. "

(*This proposal, in the form indicated by the President, was adopted*).

## 48a. Study of Oceanic Currents.

The President noted that no decision need be taken.

## 24b. Nautical information concerning Canals for inland navigation.

Commodore Reinius (Sweden) proposed that the publications containing information relative to canals should be mentioned in Sailing Directions, and added that he maintained the proposal he had submitted this morning with respect to charts.

CAPTAIN LUYMES (Netherlands) said he was now in a position to approve the proposal submitted by Commodore Reinius. The information in question was already included in the Netherlands Sailing Directions and he agreed to its insertion in the charts.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) supported the proposal, with a view to its application in all countries. In France, for instance, publications concerning the canals were issued by a Department other than the Ministry of Marine, so that mariners were frequently unaware of their existence. It was advisable, therefore, that the title of these documents should be given in the nautical publications together with information as to where they might be obtained.

COMMODORE REINIUS (Sweden) said that he had merely quoted Germany and the Netherlands as examples. His proposal included all countries.

THE PRESIDENT moved that the examination of the proposal made by Commodore Reinius be postponed till to-morrow's session, when the Delegates would be in possession of the typed draft resolution.

(*Agreed*).

## *STATEMENT BY THE DELEGATE OF GREECE.*

COMMANDER RASIKOTSIKAS (Greece) (translation) asked permission from the Chair to have the following statement inserted in the Minutes.

> "The Greek Hydrographic Office and Lights Department believed it was their duty to issue their publications in such a form that they could be understood by the mariners of all nationalities. The rejection of their proposal under N° 29, relative to the Notation for distinguishing the characteristics of Lights in the Lights lists, prevents them from carrying out this plan. These two Departments, which have till now faithfully conformed to the resolutions adopted by all previous Conferences, will be unable to give complete effect to the resolution of the present Conference with respect to proposal N° 29, as they are obliged to apply the system laid down in their Lists of Lights."

THE PRESIDENT said that the above declaration would be included in the Minutes. He stated that the Agenda for that meeting was exhausted, and that the next meeting would take place to-morrow at 9 a.m.

(The Conference rose at 4.05 p.m.).

# 10th PLENARY SESSION.

(20th April 1929)

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The Meeting opened at 9 a.m., with the President, Rear-Admiral W.S. Crosley (U.S.A.) in the Chair.

## *ADOPTION OF THE MINUTES OF THE NINTH PLENARY SESSION.*

(*The Minutes of the Ninth Plenary Session were adopted*).

## *STATEMENT BY THE SECRETARY GENERAL.*

The Secretary General rose to make a personal statement and declared that before the revision of the Statutes in 1926 the position of the Secretary General was not clearly defined.

In 1926 for some reason or other the Secretary General was included in the terms of the Statutes with the personnel, placing him on a level with other members of the staff such as typists. He was not aware of the reason for this, but it had been done and he had no complaint to make in that respect. The personnel, however, had, by decision of the Conference, been given certain material advantages from which he, as Secretary General, had been debarred. It appeared that this Conference rather than change the Statutes — he hoped that he did not use too strong an expression — had preferred to play on words and thus debar him from these advantages.

Every single member of the staff, with more than three years service in the Bureau had received some material advantage, except the Secretary General. He submitted to the Conference that he had been in the service of the Bureau, if he might so express it, even before its very inception. He was with Admiral Parry in Paris during the negociations with M. Renaud. Admiral Parry was ignorant of the French language while M. Renaud did not know a word of English. During these negociations the organisation of the International Hydrographic Bureau was worked out and not only had he taken part in the discussion between Admiral Parry and M. Renaud, but had made several suggestions which he believed had materially helped in the establishment of the International Hydrographic Bureau. It was, therefore, no exaggeration for him to say that he had now spent ten years in the service of the International Hydrographic Bureau.

He knew that the Conference in making this decision had acted in accordance with certain provisions in the Statutes and that the majority had been willing to alter this decision.

He would like to ask the minority the reason of the treatment he had received which amounted to an indirect vote of censure. He was a disciplined man and was willing to receive blame if it was considered that he merited it.

This treatment, however, had obviously given the employees the impression that he was not fit to receive the confidence of the States Members which employed him.

CAPTAIN BAUM (U. S. A.) declared that he thought this question had arisen in connection with the Report of the Finance Committee. He would like to say that there never had been any question in their minds as to the situation of the Secretary General. The Committee had always considered the Secretary General as a directing member of the International Hydrographic Bureau.

In his opinion it was clearly shown in the proposal submitted by the Directing Committee that the Secretary General should not be included in the Retirement Fund. In order to bring this proposal into line with the Statutes which appeared somewhat ambiguous the Finance Committee had suggested the insertion of the words:: "with the exception of the Secretary General".

CAPTAIN EDGELL (Great Britain) was under the impression that the omission of the Secretary General from the provisions of the Retirement Fund, was the considered arrangement put forward by the I.H.B. itself.

With regard to any amendments to the Statutes, he failed to see that the Secretary's position had been prejudiced and he was certain that, far from any feeling lack of confidence, the States Members shared with him feelings of confidence and respect for the Secretary General. (*Loud applause*).

COMMANDER BJORSET, in order to explain the point of view of the 1926 Committee on Statutes, read to the Delegates the statements which he had made as Chairman of the Committee, and which are shown at the bottom of page 292 of the Report of the Proceedings of the Second International Hydrographic Conference. This statement was as follows :

> " On this occasion it is necessary for me to make a few remarks on Admiral Phaff's statement.
>
> " On reading page 144, I am under the impression that there has possibly been some lack of conformity in the conception of the divisions of the work of the Bureau. It is not in any way my intention to say that the work of the Bureau has not been well and satisfactorily done; on the contrary. But it seems to me that the limits of activities for the Directors and the Secretary General have not been sufficiently defined. It is necessary to have full clarity in this delicate matter. There must not be any vagueness as to the qualifications required by the Directors and by the Secretary General. I do not think I am mistaken in my conception that the Secretary General should be the head of the administrative section of the Bureau, although of course, under the general direction of the Directing Committee, that is understood; but I mean that he must have the responsible vote in administrative matters. In any case, surely this was the States Members' conception, at the time the Bureau was established. I know personally that this was Admiral Parry's conception, and, as far as I know, it was also the idea of M. Renaud, whom I had the honour to know. For my part, I have always thought that

the position of Secretary General should carry with it the exercise of initiative as well as of responsibility. There should not be any divergence of opinion on this delicate matter. I think that the position of Secretary General in the above statement is proposed to be reduced to that of an ordinary subordinate Clerk; surely no one would approve such a suggestion. It is absolutely necessary for discipline, as well as for the reputation of the Bureau, that a clear decision on this matter be obtained as soon as possible.

" As to the present holder of this position of Secretary General, it is not necessary to speak of him because every one knows that he has kept the whole Bureau together, and with his high qualifications he has been the connecting link between the Hydrographers of the world and the International Hydrographic Bureau. In this most conscientious and clever sailor we have had the best guarantee that work was going on well. We are deeply indebted to him, and he deserves our highest esteem ".

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) wished to say that the Secretary General had always had the confidence of the Directing Committee which thought highly of the great and valuable services he had rendered to it.

The scheme for a Retirement Fund had received the consideration of the Directing Committee in presence of the Secretary General. It had seemed to them that, as the Secretary General was also elected for five years, he could, no more than they, enjoy the benefit of the Retirement Fund.

The idea of censure in no way entered into this, far from it.

The Secretary General stated that he had never considered the action taken by the Directing Committee to mean a vote of censure. Quite on the contrary he felt that the Directing Committee had always upheld him and the prerogatives of the Secretary General.

But he had noted that all the Members of the Staff, and also Admiral Niblack in consequence of his election as President of the Directing Committee, had received material advantages. The Secretary General alone of those who had more than five years service in the Bureau had not participed in these.

He knew of no other post, particularly where no provision for a pension was made, in which long service did not receive some recognition. The Secretary General not being entitled to a pension had to make the necessary provision himself. He was in receipt of a pension from the British Government, but if he wished to put by a sufficient amount for his retirement, by means of payments into a bank, he naturally did so in pounds sterling. Calculated in pounds sterling his salary had decreased by 18% since he joined the service of the I.H.B. He had moreover to live in one of the most expensive places in the world. If he did not receive the same advantages which were given to the others it would appear to show that he was not considered as deserving these advantages. His statement on this subject did not in any way apply to the attitude taken up by the Directing Committee.

CAPTAIN LUYMES (Netherlands) signified his agreement with Captain Edgell. The reasons underlying the adoption of Articles 27 and 28 of the Statutes by the 1926 Conference had no reference to personal matters; the idea was simply to make the organisation of the I.H.B. as efficient as possible. He himself saw nothing humiliating in being included in the personnel; he was himself included in the personnel of the Netherlands Navy and did not in any way feel humiliated. If the Secretary General had not received an increase in salary this was because his salary was held to be adequate. The President, as a citizen of the United States, might perhaps think differently, but in this particular case one must take the European and the continental point of view. A comparison with other officials on the continent redounded to the advantage of the Secretary General's salary. It was true, that these officials received pensions, but the difference between their pay and that of the Secretary General was large enough to compensate for the absence of a pension. The Head of the French Hydrographic Office was in receipt of a salary which was only equal to half of that of the Secretary General. An Admiral's pay was equivalent to about 2000 dollars. He thought that none of the Delegates to the present Conference who is Chief of the Hydrographic Service of his country receives a salary equal to three quarters of the Secretary General's pay.

It was, therefore, not a personal question; the decisions on this matter merely meant that the Conference had had nothing but the proper organisation of the Bureau in view.

THE PRESIDENT pointed out, in connection with the comparison made between salaries in the United States and in Europe, that the I.H.B. was not merely European but a world organisation. Moreover, in making comparisons, the work done and the ability of the person concerned must be taken into account.

COMMANDER PARKER (U.S.A.) said that the work of the Secretary General was highly important. He had himself acted as secretary to two technical organisations in the United States and had learnt by personal experience that the work attaching to such a post was very difficult and frequently disagreeable. He had been very favourably impressed by the able manner in which Commander Spicer Simson carried out his duties. He thought that the I.H.B. was extremely fortunate to have such a capable official in its service. He had hoped that this Conference would have liked to take this opportunity of expressing its high appreciation of the long and faithful service rendered by Commander Spicer Simson by granting him suitable material advantages.

H.E. NAPIER TOMLIN PASHA (Egypt) considered that any proposal for an increase of the Secretary' General's salary should, if thought advisable, be put forward by the Directing Committee. If the Directing Committee desired to submit a proposal in this sense it should come up for consideration at the next Conference. Should the next Conference approve of the proposal there was nothing to prevent it from having a retroactive effect. He proposed, therefore, that it should be postponed to the next Conference.

CAPTAIN LUYMES (Netherlands) explained that when he had said it was necessary to take the European and Continental point of view, he had not

in any way wished to deny the international character of the Bureau. He had simply alluded to the fact that the Secretary General had to live on the continent in Europe and that this should be taken into account. It had been stated that the cost of living was very high in Monaco, but he remembered that during the 1926 discussions the Chilean Delegate had remarked that the cost of living was highest in the Netherlands. His own pay was equivalent to 16,000 gold francs per annum. He had never wished to call the ability of the Secretary General into question. The decisions made on this subject were solely in the interests of the efficient organisation of the I.H.B. He supported H. E. Napier Tomlin Pasha's proposal.

The President made it clear that his suggested amendments to Articles 27 and 28 had nothing to do with the question of material advantages.

He noted that it had been moved and seconded that the question of the increase of the Secretary General's salary be placed on the Agenda of the next Conference.

(*This proposal was put to the vote and adopted*).

## 24b. Nautical information concerning Canals for Inland Navigation.

The President invited the Delegates to discuss the proposal of the Swedish Delegation :

> "In order to assist the seaman in obtaining the necessary information regarding canals, it is proposed to insert in a suitable position on the appropriate charts and in the Sailing Directions a brief note calling attention to the official publications in which such information is to be found."

Lieutenant-Commander Luisoni (Argentine) (translation) seconded this proposal.

Captain Edgell (Great Britain) submitted an amendment to replace the word "and" by the word "or". He wanted to prevent the charts from being overloaded with legends which were not always indispensable in order to understand them. He was, however, prepared to let the question remain open and allow the required information to be inserted at discretion in the Sailing Directions or in the charts.

Commodore Reinius (Sweden) was persuaded that the adoption of the Swedish proposal would render a service to all who desired to use the canals. There was no real difficulty in inserting this legend on the charts and therefore he maintained his proposal as originally submitted.

Commander Rasikotsikas (Greece) (translation) supported Captain Edgell's amendment.

(*This amendment was accepted by* 9 *votes to* 8.)

The President noted that this vote showed that those who desired to give practical effect to the British amendment would do so and those who were not in favour would probably refrain.

(*The Swedish proposal was adopted as amended.*)

## *REPORT OF THE COMMITTEE ON THE WORK OF THE BUREAU*

THE PRESIDENT had given careful attention to the Report in question and he had found in it nothing which in his opinion should give rise to discussion.

He suggested that the Conference examine this document page by page.

He asked Captain Luymes if he would accept a clerical amendment in the English text of this Report.

CAPTAIN LUYMES (Netherlands) replied that on the advice of H.E. Napier Tomlin Pasha, he accepted the suggested amendment — that the second line of 59a should read "notes that steps are being taken..."

(*The Report of the Committee on the Work of the Bureau was approved.*)

THE PRESIDENT congratulated the Committee on the fact that its Report was the first on which no criticism had been raised.

CAPTAIN LUYMES (Netherlands) replied that this was most likely because the Conference wished to finish its discussions.

COMMANDER PARKER (U. S. A.) expressed his appreciation of the technical work which had been done by the Bureau since the last Conference. He added that the Hydrographic Review was read with much interest by the people in his own Bureau. The information published in this Review concerning new instruments and appliances, methods of survey and of engraving, as well as the organisation of different hydrographic services, were very interesting.

Commander Parker attached special value to the articles written by the Directors and other collaborators on technical and scientific subjects connected with hydrography and cartography. He considered that the Hydrographic Review constituted a very precious contribution to hydrographic science and was of opinion that the Delegates ought to congratulate themselves on possessing so capable a Directing Committee and staff.

THE PRESIDENT asked if any other Delegates desired to submit comments before the Conference rose.

CAPTAIN LUYMES (Netherlands) declared that he was certain he was faithfully interpreting the feeling of all his colleagues by stating how much he had appreciated the skill with wich Rear-Admiral Crosley had presided over the debates of the Conference. It was thanks to his authority as President that the Conference had been able to finish its programme so soon and accomplish the large amount of work with which it had been faced. The confidence which the International Hydrographic Conference had placed in Admiral Crosley in 1929 had been justified. (*Applause*). He hopes that the 1926 and 1929 Conferences will be amongst the most pleasant memories of Admiral Crosley.

He added that he had highly appreciated the work of the Directing Committee, the Secretary General and the staff of the International Hydrographic Bureau, not only in connection with the preparation of the Conference, which had entailed a vast amount of research and organisation, but also as

regards what had been done during the Conference and the tasks that still remained to be put in hand after the closure of the session. He also wished to express his thanks to the Interpreter, the parliamentary shorthand writers and the typists who had taken so much trouble with the work.

Early in the Conference, he had told the Interpreter that he considered his translations to be even clearer than what he had said himself. This was a great compliment from him as it was known by the Conference that it was his hobby in matters of hydrography to prefer the original above the copy. He expressed the hope that all the Delegates would meet again. At a first meeting people only made each other's acquaintance, which acquaintance could grow into friendship at succeeding Conferences. It was very pleasant to have friends in all parts of the world, but in this particular case these relations were very useful to the science of Hydrography.

Captain Luymes added that it was a happy idea on the part of the I.H.B. to have gathered all the Delegates together in the same hotel. This had been done in 1919 in London, when the Conference was so heartily welcomed by the British Government. He hoped that this tradition would be followed in later conferences and that all the Delegates would mess at the same table instead of taking their meals separately. His final word would not be "Adieu" but "Au revoir", which he addressed to all his colleagues.

H.E. Napier Tomlin Pasha (Egypt) desired on behalf of the members of the Conference to thank the International Hydrographic Bureau for the hospitality they had received. He regretted that the time at their disposal had not allowed the Delegates to perform the same grateful task.

The President thanked the Delegates for the kind words said with regard to him, which appeared to have been approved by the Conference. No words could convey the pleasure these words had given him nor express his appreciation of the sincere co-operation of all the Delegates to the Conference. It had been a source of great pleasure to him to see again those Delegates whose acquaintance he already enjoyed and to meet new members. He hoped he would see them all again and trusted that old age would not prevent him from attending many more Conferences such as this.

Captain Edgell (Great Britain) regretted once again that the President of the Directing Committee had been unable to attend the meetings of the Conference and trusted that Admiral Niblack's recovery would not be long delayed. (*Approval*).

The President suggested that these words should be communicated to Admiral Niblack. (*Approval*).

The Secretary General in the name of the International Hydrographic Bureau thanked Captain Luymes and the other Delegates for their kind words concerning the Bureau. The staff of the I.H.B. had done a considerable quantity of work in preparing this Conference, but this was merely a part of its ordinary task.

He would like the Conference, however, to have some idea of the very large amount of work accomplished by his Assistants, especially Lieutenant Albert and Lieutenant Commander Bencker. Lieutenant Albert had undertaken the material and administrative organisation of the Conference

and Lieutenant Commander Bencker, with the valuable assistance of Commander Beehler, who had only recently joined the Bureau but had already done great service, had undertaken the technical side.

He would not mention all the members of the staff by name but thought that the smooth working of this Conference was in great measure due to these three Assistants and the whole staff contributed thereto. With regard to the hotel, Delegates of course could not be obliged to live at any given hotel, but an hotel could be recommended, as it was highly advantageous that they should all be together.

As regards messing the Secretary General had suggested one large table to the management of the Hotel Beau Rivage. The suggestion had, however, been received without enthusiasm on account of the difficulties in serving, more particularly as all the Delegates do not necessarily lunch at the same hour. This question would, however, receive consideration at the next Conference.

Finally he wished to express his personal thanks to the President under whom he had also worked in 1926. He had found in Admiral Crosley a chief who not only encouraged him but also understood the difficulties with which he was faced. The Secretary General had known chiefs who had not been able to understand such difficulties and had wondered why he hesitated in carrying out an order. Seamen are not accustomed to hesitate on receiving an order but the situation is not quite the same as on board ship and Admiral Crosley had understood this.

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) speaking on behalf of the Directing Committee thanked the Delegates to the Conference for their kind words of appreciation. He had been very glad to meet once again those Delegates whom he had had the pleasure of knowing in 1926 and congratulated himself on having made several new acquaintances. He hoped that he would see the same Delegates at the next Conference and that the Directing Committee would continue to deserve the praise it had received.

THE PRESIDENT regretted that M. Fichot, whose great abilities were well known to all the members of the Conference who had elected him their Vice-President, had suddenly been recalled to Paris and obliged to leave the Conference at the beginning of its work.

COMMANDER MIURA (Japan) (translation) stated that the Japanese Delegation had come from a country which was almost at the other end of the earth and this showed the great interest which the Japanese Delegation attached to the work of the Conference. On behalf of Rear-Admiral Yonemura and Lieutenant-Commander Kusakari he thanked the Bureau and the other Delegates for their invariable courtesy to the Japanese Delegation.

THE PRESIDENT reminded the Delegates that the ceremony of laying the foundation stone of the International Hydrographic Bureau would take place at 3 p.m. and that the Bureau was giving a reception at the Grand Hotel at 5 p.m.

He declared the First Supplementary International Hydrographic Conference closed.

(The Conference rose at 11.30 a.m.).

# B. RESOLUTIONS ADOPTED.

BY THE

FIRST SUPPLEMENTARY
INTERNATIONAL HYDROGRAPHIC CONFERENCE.

## I. - CHARTS.

### 1. *PUBLICATION OF LISTS OF SYMBOLS AND ABBREVIATIONS.*

The Conference resolved that :

The manual, termed " abridged ", shall continue to be published by the International Hydrographic Bureau and be kept up to date ; it is intended for national Hydrographic Offices and shall be sold to all mariners who may desire it.

### 2. *INTERNATIONAL UNIFORMITY OF SYMBOLS USED ON ALL HYDROGRAPHIC CHARTS.*

The Conference decided that the symbols under N$^{os}$ 1 to 25 (enumeration and drawings pages 8 and 9 of the Proposals) should not be discussed again as they had been definitely approved by the London Conference 1919.

*Note :* Conspicuous objects such as churches, temples, pagodas, minarets, windmills, chimneys, towers, etc., may be shown in pictorial elevation as visible from seaward, if the scale of the charts permits this to be done.

The Conference adopted the following symbols (see second list, pages 9, 10 and 11 of the Proposals 1929) :

1. *Mine, quarry*
2. *Observation spot*
3. *Ferry*
4. *Church* (large scale and small scale charts)
5. *Temple, pagoda*
6. *Mosque, minaret* *marabout*
7. *Windmill* (also in elevation).

8. *Water mill*

9. *Fort*

10. *Battery*

11. *Dry dock*

12. *Patent slip* (large scale charts)

13. *Floating dock*

14. *Leading line* (ships should not proceed on the dotted line).

15. *Course or channel recommended*

16. *Ice limit*

17. Any kind of *station* (the position of which has been fixed).

18. *Semaphore.*

19. *Signal station.*

20. *Telegraph Station.*

(⊙ followed by an appropriate legend).

21. *Fish weir*

22. *Fixed beacon*

23. *Floating beacon*

Concerning N° 22 — *Fixed Beacon* and N° 23 — *Floating Beacon,* the Conference was of opinion that these symbols should be adopted in principle, but that the Hydrographic Departments should be free to modify such symbols in detail as they may think advisable.

*Floating beacons* should, if practicable, be distinguished from the fixed beacons by being sloped instead of vertical.

24. *Light Beacon*

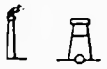
It is agreed that the countries which use a coloured sign should keep that sign.

25. *Light Buoy* (any shape of buoy in elevation).

The light should be shown by means of a star. On large scale charts the symbols should include a small circle showing the exact position of the buoy.

26. *Light vessel with submarine bell* 

The bell shown in the proposed symbol is suppressed and replaced by an appropriate legend close to the symbol.

27. *Chimney, tower* o (or in elevation) 

28. *Bench mark* 

## 3. *SYMBOLS FOR WIRELESS STATIONS.*

The Conference adopted the following symbol : 
with the addition of the letter R (R = Radio).

The legend should be completed as follows when the wireless stations serve for wireless bearings :

1° when the wireless bearing is taken from the land
R. G. (G. = Gonio).

2° when the bearing is taken from the ship :

*a*) with a deck radio direction finder, receiving signals emitted by a *circular radio beacon*
R. C. (C = Circular).

*b*) with an ordinary listening receiver, receiving signals of defined characteristics or cadences emitted by a *directional radio beacon:*
R. D. (D = Directional).

it being understood that other letters may be added as need arises.

Those countries which prefer to put whole words instead of the abbreviations G, C and D are at liberty to do so.

## 4. *SYMBOLS FOR SUNKEN ROCKS.*

The Conference resolved that :

It is agreed to adopt the symbol  for a rock of small area (pinnacle) with a depth of 10 metres or less over it at Low Water.

The symbol, alone, shall be used for a rock over which the depth is less than 2 metres at Low Water, or for a rock over which the depth is unknown, or if the scale of the chart is too small to insert the depth.

If the depth exceeds two metres and it is desired to insert the exact depth, this depth shall be indicated by a number placed, if possible, inside the symbol as follows : 

(The numeral should be of a different printing type from that of the soundings on the chart).

## 5. *SYMBOLS AND CONVENTIONS FOR WRECKS.*

The Conference resolved that :

1. Wrecks will not be shown on charts when they lie in positions where the depth of water exceeds 200 metres (110 fathoms).

2. In positions where the depth of water does not exceed 200 metres (110 fathoms) wrecks will be classified and charted as follows :

*a)* Wrecks showing any portion of the hull or superstructure above low water will be shown on all appropriate charts by the following symbol, without the word " Wreck " or the date : 

*b)* Sunken wrecks which are dangerous to surface navigation will be shown thus : 

*c)* Sunken wrecks which are not dangerous to surface navigation or the depth over which exceeds 10 fathoms or 18 metres, will be shown thus : 

the limiting depth between *b)* and *c)* being 10 fathoms or 18 metres.

3. On smaller scale charts, wrecks will not invariably be shown in the waters covered by larger scale charts. When necessary, a note to this effect will be inserted on the chart.

4. Doubtful wrecks will be marked on large scale charts with the notes " E. D. ", " P. D. ", or " P. A. ", which signify :
" Existence Doubtful ", " Position Doubtful " or " Position Approximate " as necessary, in order to differentiate them from wrecks the particulars of which are authentically known.

5. The position of the centre of the wreck will be indicated in the case of 2 *a)* by a small circle on the waterline at the base of the mast; in the cases of 2 *b)* and 2 *c)* by the intersection of the horizontal line and the centre vertical line.

6. Dangerous wrecks should be shown on all appropriate charts due account being taken of the scale. It is evident that such wrecks cannot be shown on very small scale charts.

## 6. *SYMBOLS TO DENOTE COMPULSORY SEAPLANE LANDING-PLACES ON MARINE CHARTS AND SOME OTHER MATTERS CONCERNING AERONAUTICS.*

The Conference decided :

That a pair of wings be added to these symbols on marine charts whenever it would appear of advantage to indicate that these are reserved for aircraft.

## 7. *DEPTH CONTOURS AND DANGER LINE.*

The Conference decided that the Bureau should be requested to carry out a new and full examination of this question and to submit new proposals to the States Members.

The indications given in the Report of the Sub-Committee will serve as a guide to the Bureau in its study.

## 8. *VARIOUS LIMITS.*

The Conference adopted the following symbols :

1) *Limits of fishing zones* — ⋈ — ⋈ — ⋈

2) *Limits of air ports* — ⌄ — ⌄ — ⌄ —

3) *Maritime limits in general*
Reserved areas, dumping grounds, Cotidal lines, lines of the turn of currents, etc. ——— ——— ——— (fine lines 12 m/m in length).

The Conference recommended the adoption of three different symbols for *frontiers of countries, limits of territorial waters* and *Custom frontiers.*

*International Boundary* - - - - - - - - - - -

*Limit of Sovereignty* (territorial waters) - - + - - + - - + - - +

*Customs Boundary* - - - - - - - - - - -

The elaboration of two new symbols for *Limits of Ports* and *Limits of Roadsteads* is referred to the International Hydrographic Bureau.

## 9. *INDICATION OF CHANNELS DREDGED TO A CERTAIN DEPTH.*

The Conference recommended :

that channels which have been *dredged* to a certain depth should be specially indicated as such whenever the scale of the chart permits it, with a note giving the depth and date of dredging.

The following information should be inserted in the Sailing Directions also :

" Channel dredged to ..... metres depth.

" In the year ..... ."

## 10. *COLOURING OF LIGHT SECTORS.*

The Conference adopted the following resolution :

It is desirable that those States which can do so, should colour their charts in order to indicate the colours of the light sectors, in view of the fact that this method is practically perfect.

## 11. *REFERENCE TO ADJOINING CHARTS.*

The Conference considered that it would be advisable to adopt the rule that the numbers of adjacent charts should be indicated in appropriate positions or, in case of a complex arrangement, a skeleton index should be given.

## 12. *STANDARDISATION OF TITLE OF CHARTS.*

The Conference resolved :

1° that a *geographical position* should be given on plans and charts which are not graduated and that, on graduated plans and charts, a simple reference as to the origin of longitude should be given ;

2° that the *date of the survey* be shown on charts if practicable ;

3° that every chart which is not based on an accurate survey should contain a mention to the effect that it has been made from *incomplete surveys* or *reconnaissances ;*

4° that a table of *symbols and abbreviations* need not be shown on the charts ;

5° that *magnetic variation* should be omitted from the title when it is shown against the compass rose ;

6° that whenever the *projection* is not Mercator's projection the system of projection should be mentioned on the chart ;

7° that the *authority, date of surveys* and *foreign charts* used, together with their numbers, when possible, should be mentioned ;

8° that for nations which do not use the Latin alphabet, an additional title of the chart should be printed in *Roman characters;*

9° that the enumeration of *conspicuous objects* is desirable on large scale charts, when the symbols are not accompanied by a legend ;

10° that the *variation* obtained by accurate magnetic observations, made at places near the coast and which may be useful to seamen, should be mentioned on the charts near such places or in the title whenever practicable

## 12a *TRANSLATION OF TITLE OF CHARTS.*

The Conference resolved that :

If the translation into English or into French of the title and of the more important information required for reading the chart cannot be inserted on the chart, it should be printed on a slip and pasted on the back of the chart.

## 13. *STANDARDISATION OF DATING OF CHARTS.*

The Conference resolved :

that charts should be brought up-to-date to the day when they leave the Hydrographic Office ;

that the date of correction by the Hydrographic Office should be shown on the chart ;.

that charts should bear the date to which they have been corrected by the agent who sells them after they have left the Hydrographic Office.

## 14. *DIMENSIONS OF CHARTS.*

The Conference resolved : —

that all countries should be asked to quote the dimensions between the inner border lines of their charts so that full use can be made of the material when employed for compilation purposes. This applies especially to charts and plans which are not graduated.

## 15. *SCALE OF CHARTS.*

The Conference recommended : —

the use of natural scales which are multiples of 10 (e.g. 1 : 10.000, 1 : 12.500, 1 : 25.000, etc.) for all charts.

For charts on Mercator's projection, it is recommended that the latitude on which the scale of the chart was calculated be given.

## 16. *INSERTION OF MERIDIANS AND PARALLELS ON CHARTS.*

The Conference resolved that : —

a sufficient number of meridians and parallels should be drawn on all charts published by Hydrographic Offices, whatever the scale or system of projection may be, so that it may always be possible to place a position on the chart by its geographic coordinates.

## 16a *TRUE COMPASS ROSES.*

The Conference suggested that the International Hydrographic Bureau should inform those States which had not yet complied with the resolutions adopted in London in 1919 that the present Conference would be glad to see them conform thereto.

It is suggested that those countries which do not show a true compass rose on their charts should issue to seamen such roses printed on thin transparent paper, which can be stuck on to their charts.

## 17 *SPECIAL INDICATION OF NEW PARTS OF EXCHANGE COPIES OF CORRECTED CHARTS.*

The Conference resolved : —

that the new parts on exchange copies of corrected charts should be specially indicated by a light colour wash or encircled by a coloured line.

## 18. *INFORMATION CONCERNING DANGERS MARKED "P.D." AND "E.D.".*

The International Hydrographic Bureau is requested to draw up a list of dangers marked " P.D. " and " E.D. " on charts, each being accompanied by a short historical note. All States are invited to provide the Bureau with the information necessary for the preparation of this list. "

The Conference approved of this information being published in the form of leaflets, which give details of the researches made, and in recapitulatory lists kept up-to-date by supplements.

19 *INDICATION ON CHARTS OF THE DIRECTION OF THE BUOYAGE OF CHANNELS.*

The Conference recommended that : —

*a)* When the scale of the chart permits, and when the intricacies of the channels require it, the direction of the buoyage of Channels should be indicated by an inset on the chart.

*b)* When the scale of the chart permits, and when the intricacies of the channel require it, a note conspicuously placed on the chart shall give definite information as to the system (direction) of buoyage used. "

20. *INSERTION OF THE DATE OF THE LATEST CORRECTION OF THE CHART IN CATALOGUES PUBLISHED BY NATIONAL HYDROGRAPHIC OFFICES.*

The proposal, which appears to be of no particular interest and which would entail considerable expense, was rejected by the Conference.

21. *ORIGINAL CHARTS. — PUBLICATION OF A CATALOGUE OF ORIGINAL CHARTS.*

The Conference approved the idea of inserting in the catalogue published by the Bureau a special column in which should be indicated, by appropriate signs, the nature of the survey on which each chart is based, according to the following categories :

* rapid reconnaissances ;

** partial surveys, incompletely or superficially examined ;

*** systematic surveys based on accurate triangulation and regular and close sounding lines, but not including dredging, sweeping or reconnaissance from the air of the areas, wherein unknown dangers to shipping may still exist ;

**** complete surveys based on accurate triangulation and close examination of the bottom, either by sounding or, if necessary, by dredging, sweeping or reconnaissance from the air, in such a manner that shipping practically can abstain from reckoning with the existence of unknown dangers.

22 *METHOD OF INSERTION OF ECHO-SOUNDINGS ON CHARTS. — ADOPTION OF A STANDARD VELOCITY FOR THE PROPAGATION OF SOUND IN SEA WATER.*

1. The Conference adopted the following resolution : —

*a)* that the soundings obtained by echo be plotted on charts after having been corrected as much as possible.

*b)* that they should not be distinguished from other soundings marked on the chart.

2. The Conference did not adopt a standard velocity for propagation of sound through sea water.

23 I. - *COLLATION AND PUBLICATION BY THE INTERNATIONAL HYDROGRAPHIC BUREAU OF ALL OCEANIC SOUNDINGS.*

II. - *GENERAL BATHYMETRIC CHART OF THE OCEANS.*

III. - *METHOD OF RECORDING ECHO-SOUNDINGS.*

The Conference decided : —

I. - that the International Hydrographic Bureau be entrusted with the collation of information concerning all soundings taken outside of the continental shelves.

II. - that the Bureau be charged with the keeping up-to-date of the General Bathymetric Chart of the Oceans, of which the 'Cabinet Scientifique du Prince Albert de Monaco' has just drawn up the second edition.

An English edition of the chart is not considered necessary.

III. - As concerns the method of recording echo-soundings, the Conference is of opinion that : —

Form Annex II (B)" (page 38 of the Proposals, 1929) be adopted for general purposes and, in particular, for the use of the Mercantile Marine, but the various Hydrographic Offices should, for the present, use such forms as they think best suited for the purpose.

A note is to be added at the foot of the form, "Annex II (B)", stating that it would be of advantage if additional data such as surface salinity, density, temperature, etc., were given, if available.

*ANNEX II* (B).

## Form for Recording Echo-Soundings.

Name of Ship : Type of apparatus :

Sailing from : to :

| Latitude | Longitude | Depth by instrument | Standard velocity adopted for the apparat. | Remarks |
|---|---|---|---|---|
| | | | | |

24 / 24a *AERONAUTICAL CHARTS. — COASTAL CHARTS TO BE USED IN AIR NAVIGATION PUBLISHED BY HYDROGRAPHIC OFFICES.*

29a *NOTATION FOR DISTINGUISHING THE CHARACTERISTICS OF LIGHTS ON COASTAL AVIATION CHARTS.*

*The Conference considered special coastal air-charts published by the Hydrographic Offices, only.*

It resolved to refer these various questions back to the International Hydrographic Bureau ; the results of the study thereof are to be communicated to the International Commission for Air Navigation (C.I.N.A.).

(The International Hydrographic Bureau shall take into account the indications given in the Report of the Sub-Committee on Air Charts).

24b *NAUTICAL INFORMATION CONCERNING CANALS FOR INLAND NAVIGATION.*

The Conference resolved that : —

In order to assist the seaman in obtaining the necessary information regarding canals for inland navigation, a brief note should be inserted in a suitable position on the appropriate charts, or in the Sailing Directions, calling attention to the official publications in which such information is to be found.

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## II. - SAILING DIRECTIONS, LISTS OF LIGHTS AND OTHER NAUTICAL BOOKS.

25. *INDICATION OF SOURCE AND DATE OF INFORMATION RELATIVE TO FOREIGN COASTS IN NATIONAL SAILING DIRECTIONS.*

The Conference recommended that : —

*a)* it be clearly mentioned in partly non-original Sailing Directions which publications (with the year of issue) have been used or partly used in their compilation.

*b)* for the compilation of non-original or partly non-original Sailing Directions, those issued by the country described or issued by the Government which controls that country should be used

26. *PUBLICATION OF AN INDEX-CHART OF ORIGINAL SAILING DIRECTIONS.*

The Conference recommended : —

the publication of an index-chart of Original Sailing Directions for use with the Index of Original Charts.

## 27. *BEARINGS TO BE GIVEN FROM SEAWARD IN THE LISTS OF LIGHTS.*

The Conference resolved that : —

In Lists of Lights, bearings should be true and be reckoned in degrees from 0° (North) to 360°, measured clockwise and given from seaward ; the bearing limits of sectors and arcs of visibility should also be given from seaward.

## 28. *TABULAR METHOD OF COMPILATION OF THE LISTS OF LIGHTS.*

The Conference resolved that : —

It is desirable that the introduction and headings of columns should be translated into English or French in such lists as are issued in languages other than English or French.

## 29. *NOTATION FOR DISTINGUISHING THE CHARACTERISTICS OF LIGHTS.*

The Conference rejected a proposal made by the Documents Committee.

29ª *See above : N°ˢ 24 - 24ª.*

## 30. *INFORMATION CONCERNING LISTS OF SIGNAL STATIONS FOR INSERTION IN THE LIGHT LISTS.*

The Conference resolved that : —

In the interest of uniformity of method, and to save unnecessary expense, it is preferable to free Light Lists from undesirable complications and insert only such information as is absolutely necessary.

## 31. - 31ª. *INTERNATIONAL CODE BOOK OF SIGNALS.*

The Conference decided that : —

The International Hydrographic Bureau shall not, as a rule, publish lists of data which have already been published by the national Hydrographic Offices.

The issue of the List of Life Saving Stations should be continued and it should be kept up-to-date by the International Hydrographic Bureau.

## III. - NOTICES TO MARINERS.

32. *TRANSLATION INTO ENGLISH OR FRENCH OF THE FIRST NOTICE TO MARINERS OF EACH YEAR ISSUED IN A LANGUAGE OTHER THAN ENGLISH OR FRENCH.*

The Conference resolved that : —

It is desirable that Notices to Mariners called " General Notices ", containing general information which it is advisable to disseminate and to make known to foreigners, should be translated into English or French and printed in Roman characters.

33. *PERIOD OF PREVIOUS NOTICE TO BE GIVEN BEFORE THE INSTALLATION OR ALTERATION OF AIDS TO NAVIGATION.*

The Conference considered that *at least* two months previous notice should be given whenever practicable, of the installation of important new aids to navigation or of important alterations in those which already exist.

33ª *NOTICES TO MARINERS. — SUMMER TIME.*

The Conference recommended that the Hydrographic Offices of every nation should publish annually, as early as possible, a Notice to Mariners giving the dates of application of summer time for its own country, its colonies, protectorates and dependencies and for such other countries of which it has been informed of such dates.

As far as possible Notices of this type should be grouped together and appear at the beginning of one of the periodical issues of Notices to Mariners

34. *MENTION, IN NOTICES TO MARINERS, OF THE INTENTION TO ISSUE FURTHER NOTICE ON ANY SUBJECT.*

The Conference considered that : —

if it is intended to issue a further notice on any subject, the fact should be mentioned in the first or preliminary Notice.

35. *NOTICES OF A TEMPORARY NATURE.*

The Conference expressed the following wishes : —

*a)* that Notices of a temporary nature should be so marked by each country ;

*b)* that each country should issue a Monthly List of temporary Notices still in force. "

## 36 - 36a. *DISSEMINATION OF NOTICES ABROAD AND CENTRALISATION OF NOTICES IN THE PRINCIPAL PORTS.*

The Conference approved of the principle of centralisation of Notices in certain ports on the following bases :

1. The Hydrographic Offices shall make known to the International Hydrographic Bureau the ports of their country and colonies for which they desire the service of centralisation of the Notices issued by other nations and the addresses to which these Notices should be sent.

2. The International Hydrographic Bureau will publish a list of these ports and of these addresses.

3. The Hydrographic Offices shall then inform the International Hydrographic Bureau of those ports to which they agree to send their Notices free of charge.

4. The International Hydrographic Bureau will publish a revised list of ports and addresses and of the National Offices which send their Notices to each.

5. The Hydrographic Offices shall inform mariners, by means of their Notices to Mariners, of the ports and addresses where this centralisation is in operation.

The Hydrographic Offices should indicate periodically (annually for example), by means of Notices to Mariners, the ports with centralising services to which they send their Notices to Mariners and at which seamen can consult them.

It would be of advantage if this list be inserted in the Sailing Directions.

## 36b *MENTION OF ORIGINAL CHARTS IN NOTICES TO MARINERS.*

The Conference decided to postpone this question until the next Conference.

## 37. *LIMITS OF OCEANS AND SEAS.*

The Conference adopted the limits described in the International Hydrographic Bureau's Special Publication N° 23, for the geographic repartition of Notices to Mariners, in agreement with that of the Sailing Directions and Light Lists.

The index-chart of this Publication may subsequently be modified in accordance with suggestions made by States Members.

The Conference hoped that a system might finally be found which could be generally taken as a sound basis for arranging Notices to Mariners and Sailing Directions under the same geographical divisions.

# IV. - QUESTIONS COMMON TO HYDROGRAPHIC PUBLICATIONS IN GENERAL.

## 38. *USE OF ENGLISH OR FRENCH IN PUBLICATIONS OTHER THAN THOSE IN ENGLISH OR FRENCH.*

The Conference considered it desirable that : —

1) the catalogues of Charts which are published in languages other than English or French should be translated into English or French in order that they may be read and understood by mariners of any nationality. The introduction, preface, headings of columns, etc., at least, should be translated into English or French, as is the case, for example, in the Swedish Catalogue of Charts and the Greek Catalogue of Distances.

2) that an English or French summary be given of any publication issued by a Hydrographic Office to which it desires to draw attention.

3) that any interesting publication concerning Hydrography may be published in French and in English by the International Hydrographic Bureau, permission to reproduce having first been obtained from the authors.

## 39 *COPYRIGHT OF HYDROGRAPHIC PUBLICATIONS.*

The Conference expressed the following wish : —

It is desirable that every Hydrographic Office should be free to reproduce, except in facsimile, all impersonal publications of other Hydrographic Offices, provided that such reproduction shall have printed on it a due acknowledgement of the original source from which it is derived.

## 40 *OVERLAPPING OF HYDROGRAPHIC PUBLICATIONS.*

The Conference resolved that : —

where it is necessary to overlap or duplicate matter in hydrographic publications, the evidence of such overlapping with another publication of the same kind shall be so clearly indicated that no overlap can escape notice when making corrections.

## 41. *NON-OFFICIAL PUBLICATIONS.*

The Conference resolved : —

*a)* that Hydrographic Offices should warn seamen against the use of non-official publications for navigational purposes and endeavour to bring about the use of official publications, as these only are corrected up to the date of their sale and while they are in use, by means of lists of corrections.

*b)* that Hydrographic Offices should further endeavour to bring before their National Marine Boards the question of taking action within their jurisdiction against captains of ships who get into difficulty through using unauthorized publications for navigating.

42. *DISSEMINATION OF NAUTICAL INFORMATION.*

The Conference expressed the wish that : —

each Hydrographic Office should seek to obtain prompt information as to changes in aids to navigation, not only from those branches of the Government which are charged with their maintenance, but also from pilots, masters of vessels and others, who should be encouraged in every way to report immediately any divergencies which they have observed between aids to navigation and the indications given on charts or descriptions given in other official publications.

## V. - MISCELLANEOUS.

43. *UNIFICATION OF THE INTERNATIONAL NOTATIONS FOR LATITUDES, LONGITUDES, Etc...*

The Conference decided not to discuss this question.

44 *USE OF THE INTERNATIONAL ELLIPSOID.*

The Conference expressed a wish in favour of the use of the International Ellipsoïd for hydrographic purposes whenever the obligation to employ earlier works is not an obstacle to such use.

45. *ADOPTION OF A UNIFORM LENGTH FOR THE SEA-MILE.*

The Conference resolved that : —

the length represented by 1852 times that of the international prototype of the metre shall be the International Nautical Mile.

46 *GEOGRAPHICAL TERMS USED ON CHARTS AND IN SAILING DIRECTIONS.*

The Conference rejected the proposal made.

47. *STANDARDISATION OF LUMINOUS TIME-SIGNALS.*

The Conference recommended : —

that luminous time signals should conform to the following system :

The signal should be very simple : Five minutes before the hour indicated the lamps shall be lit and the signal shall end at the hour indicated. The instant of extinction constitutes the time signal itself.

In consequence the warning signal made by lighting of the lamps, is given 5 minutes before the time indicated. The signal should be made at least three times per diem.

48 *SAFETY LANES AND DANGER ZONES.*

The Conference instructed the Bureau to write to the International Conference on Safety of Life at Sea, which is meeting in London, inviting that Conference to study the question of Danger Zones and Safety Lanes.

48a *STUDY OF OCEANIC CURRENTS.*

The Conference expressed the opinion that the International Hydrographic Bureau should encourage the study of oceanic currents insofar as they concern hydrography and, consequently, navigation.

With special reference to the study of the Humboldt Current, the Conference noted that this question has already been submitted to the Consejo Oceanográfico Ibero-Americano.

## VI. - STATUTES.

49 *CONDITIONS TO BE FULFILLED FOR ADMISSION AS A MEMBER OF THE INTERNATIONAL HYDROGRAPHIC BUREAU.* (Art. 3 and 65).

The Conference resolved : —

1. To replace Article 3 of the Statutes, 1926, by the following :

"3. a) Any other State, Member of the League of Nations, if it so desires, shall be admitted as a Member of the Bureau.

"b) The admission of States which are not Members of the League of Nations, will be decided by the vote of the Members of the Bureau, and not less than two-thirds of the number of these must give their consent to such admission."

2. To replace Article 63 (v), by : —

"v. The balance of the accounts of the Bureau shall be divided amongst the actual Members at the moment when the suppression is decided upon.

"In the case of a credit balance, this will be divided amongst the States Members in proportion to the amount contributed by each of them since it joined the Bureau.

"In the case of a debit balance, this will be divided amongst the States Members in proportion to their last annual contributions."

50. *KEEPING UP-TO-DATE OF THE TABLE OF TONNAGES* (Art. 34).

The Conference resolved that Article 34 (b) of the Statutes, 1926, shall be modified to read : —

" 34. b) The tonnages taken for the purpose of determining the contributions of the States Members are given in Appendix D which shall be brought up-to-date by the Directing Committe before each periodical Conference by the following procedure : — The invitation prescribed by Art. 56 (a), shall contain a request for the revised tonnage figure for each Member, which figure should be sent to the Bureau with the list for subjects and questions to be discussed. The Directing Committee will add a statement of the new figures for Appendix D to the schedule which is to be despatched to the Members six months before the proposed date of meeting of the Conference.

" Should a State desire to adhere to the Bureau, it shall declare the amount of tonnage (Naval and Mercantile) which flies its flag. The Directing Committee will announce this figure to the Members, and enter it in Appendix D as soon as the adhesion becomes définite. "

NOTE : *All mention in the Statutes of approval by a Conference or by States Members of figures declared by a State Member is eliminated.*

50a. *CONTRIBUTION OF THE PRINCIPALITY OF MONACO.* (Art. 35b).

The Conference resolved to modify Article 35 (b) of Statutes 1926 to read as follows : —

" 35. b) The Principality of Monaco enjoys a special treatment. In consideration of the fact that it provides the Bureau with premises free of charge it shall not pay any contribution, but shall keep the votes to which it is entitled in accordance with paragraph (a) of this Article. "

51. *VOTES OF STATES WHICH ARE NOT MEMBERS OF THE BUREAU.* (Art. 57b).

The Conference resolved to modify Art. 57 (b) of the Statutes 1926, to read as follows : —

" 57. b) A State which is not a Member, and is represented at a Conference, shall not have the right to vote on any question, the Delegation being invited to take part in the Conference in a consultative capacity and as an observer only. "

53 *See below : — ADMINISTRATION.*

# VII. - ADMINISTRATION.

## 52. *REVISION OF THE FREE DISTRIBUTION LISTS OF PUBLICATIONS OF THE INTERNATIONAL HYDROGRAPHIC BUREAU.*

The Conference resolved that : —

The free delivery of the Bureau's publications, Review, Bulletins, Special Publications, etc., effected at the request of the States Members, shall be limited in the following manner : —

1. *Delivery to Hydrographic Offices :*

One copy for the official Government Representative in connection with the Bureau.

One copy for each Section or Division shown in the Year-Book published by the Bureau, with a maximum limit of ten copies.

2. *Delivery to Hydrographic Expeditions :*

One copy for each organised expedition including more than two officers and the existence of which shall have been notified to the Hydrographic Bureau when indicating the Work projected for the current year.

3. *Free delivery only to Offices, Organisations or National Institutions of a maritime character* notified by the Hydrographic Offices. Maximum number : ten for each State Member.

The Conference was of opinion that the names of private persons should not be placed on the permanent free distribution lists.

The Bureau may make free delivery of the publications to former Directors and Secretaries General of the International Hydrographic Bureau.

## 52ª *EXCHANGE OF THE INTERNATIONAL HYDROGRAPHIC BUREAU'S PUBLICATIONS FOR THOSE OF THE CONSEJO OCEANOGRAFICO IBERO-AMERICANO.*

The Conference approved such exchange.

## 53. *FORMATION OF A RETIREMENT FUND FOR THE STAFF OF THE INTERNATIONAL HYDROGRAPHIC BUREAU.*

The Conference decided that : —

A fund is to be created from which grants shall be made to employees who leave the Bureau. This measure must not entail any increase of contribution from the States Members.

The Conference adopted the draft Rules for the Retirement Fund for the employees of the International Hydrographic Bureau proposed by the Finance Committee.

The Conference decided to introduce into the 1926 Statutes the following amendments :

I. — The addition of the following paragraph to Article 43 : —

(h) A Retirement Fund for the employees shall be formed. The sums set aside for the constitution of this Fund in accordance with the provisions of the Staff Regulations shall be earmarked for the service of the Retirement grants and as a guarantee therefor, and thus may not be employed, even temporarily, for any other purpose. They shall not be subject to seizure by any creditor who is not a member of the staff of the Bureau nor be deposited with such person as security.

II. — The following paragraph to be substituted for Article 63, paragraph 1.

1. The staff shall be reduced to a minimum and each employee shall, on the day of the termination of his services, receive the sums due to him in accordance with the Staff Regulations, either as payment in lieu of notice or as a balance from the Retirement Fund or in any other manner. The rights of the employees with respect to the funds of the Bureau shall be privileged.

## 54. *REPORTS OF PROCEEDINGS OF CONFERENCES.*

In order to reduce the cost of the Reports of Proceedings of Conferences and to hasten their publication, the Conference decided that : —

I. The Report of Proceedings will be a *summary* report only.

II. The summary report of each session (whether Plenary Session or Session of a Committee) will be drawn up and distributed to the Delegates within 24 hours of the closing of the session.

III. Delegates will be enabled to have important statements, which are made during the sessions, inserted *in-extenso* in the Report of Proceedings.

## 55. *DATE OF NEXT PERIODICAL CONFERENCE.*

The Conference decided that the next periodical Conference should meet about ten days after Easter, 1932.

## VIII. - GENERAL.

### 56 *WORK DONE BY THE INTERNATIONAL HYDROGRAPHIC BUREAU.*

The Conference approved of the Report rendered by the Committee on the Work of the Bureau.

In general the Conference took note with satisfaction of the work done by the Bureau, not only of the work with which the Bureau was entrusted, but also of the work undertaken on its own initiative.

The report prepared by the Committee gives detailed remarks concerning each item of work undertaken by the Bureau and some indications for the continuation of the work.

THIRD PART.

# COMMITTEES

## A. CHARTS COMMITTEE.

*LIST OF MEMBERS OF THE COMMITTEE.*

*Chairman :* Captain J. A. EDGELL (*Great-Britain*).

*Vice-Chairman :* Commodore G. P. REINIUS (*Sweden*).

| | |
|---|---|
| BJORSET, Commander ..... | *Norway.* |
| BRIVONESI, Commander ..... | *League of Nations.* |
| COT, Ingénieur-Hydrographe en Chef... | *France.* |
| HERRERO, Rear-Admiral ..... | *Spain.* |
| KUSAKARI, Lieutenant-Commander ..... | *Japan.* |
| KURZE, Commander ..... | *Germany.* |
| LOPES, Lieutenant-Commander ..... | *Portugal.* |
| LUISONI, Lieutenant-Commander ..... | *Argentine.* |
| LUYMES, Captain ..... | *Netherlands.* |
| PARKER, Commander ..... | *United States of America.* |
| RAVN, Commodore ..... | *Denmark.* |
| ROMAGNA-MANOIA, Captain ..... | *Italy.* |
| YORGOULIS, Lieutenant-Commander .... | *Greece.* |

*Secretary :* Lieutenant-Commander H. BENCKER (*I.H.B.*).

# 1st MEETING OF THE CHARTS COMMITTEE.

(10th April, 1929).

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The first meeting of the Charts Committee was held on Wednesday, 10th April, 1929.

The meeting was opened at 2.30 p.m. by M. l'Ingénieur Hydrographe General P. de Vanssay de Blavous, Director I. H. B.

## *ELECTION OF A CHAIRMAN.*

Commander Parker (U.S.A.) proposed to elect as Chairman of the Committee Captain Edgell of the British Delegation.

This proposal was seconded by the Delegates of Norway, Japan and Greece.

Ing. Hydrographe en Chef Cot (France) (translation) ventured to propose as Chairman, Commodore Reinius who was well accustomed to directing debates.

(*Commander Parker's proposal was put to the vote and adopted. Captain Edgell was elected to the Chair*).

(Captain Edgell took the Chair).

The Chairman thanked the Delegates for having selected him to direct the debates and announced that Lieutenant-Commander Bencker would act as Secretary to the Committee.

## *ELECTION OF A VICE-CHAIRMAN.*

Lieutenant-Commander Yorgoulis (Greece) (translation) proposed to elect Commodore Reinius as Vice-Chairman.

This proposal was seconded by Commander Parker (U.S.A.), Commander Bjorset (Norway), Rear-Admiral Herrero (Spain) and Lieutenant-Commander Kusakari (Japan).

(*It was put to the vote and unanimously adopted*).

Then the Committee proceeded to examine the questions on the Agenda entrusted to it by the Conference : —

## 2. International Uniformity of Symbols used on all Hydrographic Charts.

The Chairman called the attention of the Delegates to the fact that the list of symbols on pages 8 and 9 of Proposals had already been adopted

by the London Conference of 1919 and had been universally employed in fact. If no objection were raised against them, he would propose to pass on immediately to the examination of the second list which started at the bottom of page 9 of Proposals.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) asked whether it was necessary to maintain the dot above the figure of symbol N° 10 (depths in which the bottom has not been reached).

COMMODORE REINIUS (Sweden) replied that there was no reason to modify this symbol, which had already been adopted by the London Conference.

COMMANDER BJORSET (Norway) thought that the Conference should deal first with question N° 1, page 7 of Proposals, although this question was not mentioned on the Agenda of the Committee.

THE CHAIRMAN stated that this question did not appear on the Agenda of the Committee as it had already been discussed by a committee in 1926, and was, therefore, to be brought up on the Agenda of a Plenary Session. It would be discussed the very next morning.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) asked why the question of symbols came up on the Agenda of the present Committee if, owing to the fact that they had already been adopted by the London Conference, they were not to be further discussed.

THE CHAIRMAN replied that the symbols which had been definitely adopted in London were published in the Proposals merely for the purpose of giving information and not in order to give rise to a fresh discussion.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) stated that he might be inclined to deduce from the French text that these symbols had not been adopted by the London Conference, since it was stated on page 8 : " Omitting those which may give rise to further discussion, they are : ....."

THE SECRETARY pointed out that the only symbol to be discussed was N° 17. (Tracks).

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) stated that N° 17 was repeated under N° 14 of the second list on page 10 and that it could be discussed when that number was reached.

COMMANDER PARKER (U.S.A.) asked whether a mistake had not been made on page 8. The symbol given under N° 6 (eddies and whirlpools) was used on American charts to indicate overfalls and tide rips, whereas, on the other hand the symbol shown under N° 7 was used to indicate eddies.

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) replied that a mistake had occurred in the English text resulting in a confusion between N°s 6 and 7. The French text was correct.

THE CHAIRMAN informed the Committee that Commodore Reinius proposed that the symbol given under N° 10 should be maintained as adopted by the London Conference.

COMMANDER BJORSET (Norway) stated his approval of the above.

The Chairman said that two proposals therefore lay before the Conference, that of M. Cot in favour of suppressing the dot above the figure, and that of Commodore Reinius, supported by Commander Björset, in favour of keeping the symbol as shown on page 8.

*(The proposal submitted by Commodore Reinius was put to the vote and adopted by a show of hands).*

Commander Parker (U.S.A.) asked if all were agreed to keep symbol N° 1 to indicate a rock awash. On American charts the symbol employed for this was three intersecting lines.

The Chairman was of opinion that further discussion should not be given to the symbols under N°s 1 to 25, since they had been definitely approved by the London Conference. He proposed, therefore, that the Committee should proceed to examine the second list on page 9 of Proposals.

He asked the Committee if they were in favour of approving the symbol given under N° 1 " Mines and Quarries. "

(*Adopted*).

**Symbol N° 2. OBSERVATION SPOT.**

Commodore Reinius (Sweden) was of opinion that this symbol resembled too closely that given under N° 4 (Church).

Commander Bjorset (Norway) did not think that any symbol was necessary to indicate an observation spot.

Commander Parker (U.S.A.) called the attention of the Delegates to the fact that symbol N° 17, page 10, could do for N° 2.

Commander Bjorset (Norway) proposed to delete symbol No. 2 considering that N° 17 met all requirements if necessary with an appropriate legend.

Lieutenant-Commander Yorgoulis (Greece) seconded this proposal.

Ing. Hydrographe en Chef Cot (France) (translation) observed that the symbol " observation spot " was very convenient. It could not be easily confused with the proposed church symbol as one was drawn in thick lines and the other in thin lines.

Commander Kurze (Germany) (translation) proposed to include " observation spot " under symbol N° 21 which is given on the first list for " Triangulation Station. "

Lieutenant-Commander Yorgoulis (Greece) (translation) declared that a triangulation station was wholly different from an " observation spot. "

Lieutenant-Commander Luisoni (Argentine Republic) (translation) thought that it would be necessary to emphasise the difference between an " astronomical station " and a " trigonometrical station. "

Commander Bjorset (Norway) pointed out that there were several different kinds of observation stations, — triangulation stations, astronomical stations, magnetic stations, etc., — and that it would be difficult to adopt a special sign for each kind of station. It was therefore preferable to follow Commander Parker's suggestion and leave the symbol shown under N° 17

on page 10, which covers all kinds of stations adequately, and delete symbol N° 2 on page 9.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) pointed out that if symbol N° 2 were suppressed it would frequently be necessary to add full information.

COMMODORE REINIUS (Sweden) had no objection to symbol No. 2 being used by countries which found it practical, while other countries could, if they preferred, use symbol N° 17 or that for triangulation stations.

THE CHAIRMAN stated that two symbols were proposed to replace symbol N° 2 but if either of these two were adopted to indicate Observation Spots there would be a risk of confusion on the charts. Thus symbol 17 on page 10 was already in use on the British, American and Dutch charts to show semaphores and in a general way stations of all kinds.

On the other hand, on referring to the tabulation drawn up by the Bureau (Abridged Manual of Symbols — Special Publication N° 22), one would find that symbol N° 2 was used for Observation Spots by Great Britain, the United States and Germany. It would thus appear advisable to use it generally.

THE SECRETARY pointed out that it would be difficult in this case to adopt a sign which was a combination of a cross and a circle, since in discussing Proposal N° 3 it would be seen that a similar sign had been proposed for Wireless Stations and was already used on American charts.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) was of opinion that it was desirable to have a special sign for an Observation Spot ; in order, however, to avoid confusion with the symbol for a church, he proposed the following symbol :



LIEUTENANT-COMMANDER KUSAKARI (Japan) described the conventional signs which were employed by the Hydrographic Department of his country, more particularly to show the observation stations for latitude and longitude.

LIEUTENANT-COMMANDER LUISONI (Argentine Republic) (translation) was willing to accept the symbol adopted by the 1919 Conference for " observation spot " and did not see why it should be replaced by another.

THE CHAIRMAN thought that none of the proposals made had been seconded. He asked who was not in favour of adopting symbol N° 2 (page 9) proposed by the Bureau.

LIEUTENANT-COMMANDER YORGOULIS (Greece), COMMODORE REINIUS (Sweden), COMMANDER BJORSET (Norway), COMMANDER PARKER (U. S. A.) and ADMIRAL HERRERO (Spain) declared themselves not in favour of adopting the symbol.

THE CHAIRMAN declared that it should be stated in the report of the Committee that the votes had been equally divided and the Committee could therefore make no proposal on this matter.

**Symbol N° 3. (Proposals, page 10). FERRY.**
(*Adopted*).

**Symbol N° 4. (page 10).**

Lieutenant-Commander Luisoni (Argentine Republic) (translation) remarked that two symbols were given.

The Chairman replied that these two symbols were intended for charts of different scales.

(*N° 4 was adopted*).

**Symbol N° 5. (page 10). TEMPLE - PAGODA.**

The Secretary declared that the first symbol was not accurately drawn. The diagonal lines should be prolonged outside the rectangle.



The Chairman, in reply to Lieutenant-Commander Yorgoulis' question as to whether one of the two first symbols would not be sufficient, stated that these three symbols had been taken from Japanese charts and most likely indicated different types of temples and pagodas. As these three symbols were employed by one country, it was advisable to let them all appear in the list.

(*N° 5 was adopted*).

**Symbol N° 6. (page 10). MOSQUE - MINARET - MARABOUT.**

The Chairman thought that what he had already said about N° 5 also applied to N° 6.

(*N° 6 was adopted*).

**Symbol N° 7. WINDMILL.**

The Chairman asked M. Cot if the sign had been properly reproduced. Was not the cross above the circle in the French charts?

Ing. Hydrographe en Chef Cot (France) (translation) replied that the cross was usually above the circle but not always.

Commander Kurze (Germany) suggested a sign which would resemble a windmill more closely, so that it could at once be seen that it referred to a windmill.



Commodore Reinius (Sweden) proposed that both symbols should be accepted. It would then be possible to use either sign in the charts of the various countries.

Ing. Hydrographe en Chef Cot (France) (translation) seconded this motion.

Commander Bjorset (Norway) admitted that a sign which resembled the object itself was always préferable and if the German Hydrographic Office used this sign, it would be a source of satisfaction to everyone.

ING. HYDROGRAPHE GENERAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) recalled that the Conference of 1919 had decided that mills and conspicuous buildings might be shown in elevation to represent their aspect as seen from the sea.

COMMANDER BJORSET (Norway) did not think that the remark made by M. Vanssay de Blavous was incompatible with the proposal submitted by the Delegate of Germany.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) proposed that it should be stated that windmills could also be shown in elevation.

(*N° 7 was adopted with this amendment*).

**Symbol N° 8. WATERMILL.**

LIEUTENANT-COMMANDER KUSAKARI (Japan) proposed the following sign ⛬ because the symbol which had been suggested by the Bureau might lead to confusion with the sign proposed for lighthouses in charts for aerial navigation.

COMMANDER KURZE (Germany) (translation) thought that a sign similar to the one suggested by the Bureau but smaller and with only five radiating lines would prevent confusion.

THE CHAIRMAN pointed out to the Delegate of Germany that the size of the signs submitted to the members of the Committee would not be the actual size of these signs on the charts.

(*The proposal of the Delegate of Japan was adopted*).

**Symbol N° 9. FORT.**

(*Adopted*).

**Symbol N° 10. BATTERY.**

(*Adopted*).

**Symbol N° 11. DRY DOCK.**

(*Adopted*).

**Symbol N° 12. PATENT SLIP.**

ING. HYDROGRAPHE EN CHEF COT (France) (translation) pointed out that this symbol would appear to be suitable mainly for large scale charts.

(*Adopted*).

**Symbol N° 13. FLOATING DOCK.**

(*Adopted*).

**Symbol N° 14. LEADING LINES.**

COMMANDER PARKER (U.S.A.) pointed out that in chart making practice in the United States continuous lines were only used to indicate

visible objects and broken lines to indicate objects that were not visible. The proposal of the Bureau was therefore contrary to this practice.

Lieutenant-Commander Yorgoulis (Greece) (translation) was also in favour of everything above the surface and therefore visible being shown by continuous lines, while objects below the surface and thus invisible should be represented by broken lines.

Commander Kurze (Germany) (translation) preferred to use continuous lines to indicate leading lines, which are as a rule straight lines, and to reserve dotted lines for curves.

Captain Tonta (Director I. H. B.) (translation) explained that the intention was to distinguish clearly between that part of routes which the ship should follow and the part which should not be followed. This sign had a real practical meaning.

Commodore Reinius (Sweden) stated that the continuous line was used in Sweden to show the route to be followed, while dotted lines were reserved for light sectors.

Captain Tonta (Director I. H. B.) (translation) pointed out that the use of the dotted line must be admitted for contour lines, for example, and when it was not likely to lead to confusion no inconvenience could arise from the use of the continuous line to indicate the route to be followed and the dotted line to show only the continuation of the leading lines.

(*The Bureau's proposal was adopted*).

**Symbol N° 15. COURSE OR CHANNEL RECOMMENDED.**

Commander Parker (U.S.A.) would prefer these lines to be either in dots or in small pecks.

Commander Kurze (Germany) (translation) agreed.

Ing. Hydrographe en Chef Cot (France) (translation) thought that dotted lines were not sufficient for such an important symbol.

Lieutenant-Commander Yorgoulis (Greece) (translation) approved this observation.

Commodore Reinius (Sweden) also approved it. Only a few years ago Sweden left off using dotted lines and started to employ the continuous line to indicate on charts the course or channel recommended. Time had shown that the system of continuous lines was far more satisfactory than that of dotted lines.

Ing. Hydrographe Général de Vanssay de Blavous (Dir. I. H. B.) (translation) recalled the fact that the dotted line had been adopted to indicate danger lines. It would therefore not be convenient to employ it again for the course or channel recommended.

Commander Kurze (Germany) (translation) would accept the proposal of the Bureau on the grounds that it is easier to replace a dotted line by a continuous line than to replace a continuous line by a dotted one.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) seconded this observation.

(*N° 15 was adopted*).

**Symbol N° 16. ICE LIMITS.**

(*Adopted*).

**Symbol N° 17. ANY KIND OF STATION.**

THE CHAIRMAN observed that symbol N° 17 had already been discussed at length during the debate on symbol N° 2. There could, therefore, be no use in resuming the discussion on that subject.

COMMANDER PARKER (U.S.A.) was also of opinion that a great deal of time had been given to a question which was only of slight interest to mariners. In any case the symbol provided under N° 17 could only indicate the exact position of the point referred to and should always be accompanied by a legend stating the nature of that point.

LIEUTENANT-COMMANDER KUSAKARI (Japan) proposed to take a circle as the symbol for "any kind of station" and a semi-circle for N° 27 (chimney, tower). He based his suggestion on the fact that in Japan a circle was used to indicate "any kind of station", while the symbols he had just explained were used for observation spots.

COMMODORE REINIUS (Sweden) remarked that on the Swedish charts a small circle was used for chimneys and towers and that it would be impossible to replace this sign by a semi-circle, which was too difficult to read.

COMMANDER PARKER (U.S.A.) did not see the use of symbol N° 27. As soon as the exact trigonometrical position of the chimney or tower had been determined, it came under the heading of "any kind of station."

ING. HYDROGRAPHE EN CHEF COT (France) (translation) thought that symbol N° 27 referred to a point the exact trigonometrical position of which had not been fixed.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) suggested that the symbol proposed for N° 17 should be adopted, while N° 27 should be reserved for further consideration ; it might for instance be possible to insert an indication next to the sign given under that number showing that it referred to a chimney or tower.

COMMANDER PARKER (U. S. A.) seconded this motion.

(*This proposal was put to the vote and adopted*).

**Symbol N° 18. SEMAPHORE.**

COMMANDER KURZE (Germany) proposed that symbols 18 (semaphore) and 19 (signal station) should be examined together. On German charts a sign similar to that shown under N° 19 was used for semaphores and a sign showing a small flag was used for signal stations.

COMMODORE REINIUS (Sweden) thought that symbols 18, 19 and 20 (telegraph station) were too complicated. They did not appear to him to be very practical, since navigating officers in order to understand them

would be continually obliged to refer to their lists of symbols and abbreviations. It would therefore be preferable to replace these signs by that given under N° 17 (any kind of station) accompanied by a legend giving the nature of the station.

Commander Bjorset (Norway) did not object in principle to the adoption of these three symbols, but the proposal of Commodore Reinius seemed preferable to him from the practical point of view.

Commander Parker (U.S.A.) supported the suggestion made by Commodore Reinius. Every effort should be made to keep symbols as simple and easy to read as possible.

Ing. Hydrographe en Chef Cot (France) (translation) thought that the symbol for a semaphore was sufficiently important to be given on small scale charts, on which it is not always easy to write legends. If it were not intended to keep a symbol for each of the three kinds of stations mentioned under N°s 18, 19 and 20 it would nevertheless be essential to reserve a sign for semaphores.

The Chairman was under the impression that the Committee appeared to be in agreement with regard to the three symbols, it being understood that they would only be used on certain charts and that they could always be replaced when possible by sign N° 17 accompanied by a legend. He proposed therefore that the Committee should state in its report to the Conference that it did not oppose the three symbols given under N°s 18, 19 and 20 but that it was of opinion that symbol N° 17 accompanied by a short explanatory note would best suit the requirements of mariners.

Lieutenant-Commander Yorgoulis (Greece) (translation) proposed that a small flag should be placed above the circle in sign N° 19, as this would be a better indication for a signal station.



Commander Kurze (Germany) (translation) supported this suggestion.

Ing. Hydrographe en Chef Cot (France) (translation) pointed out that the small square which it was proposed to place above the circle in symbol N° 19 might lead to confusion, as this sign was used to indicate certain buildings.

Lieutenant-Commander Yorgoulis (Greece) (translation) suggested that a triangular flag should be used.



Commander Kurze (Germany) had no objection to the flag being either triangular or square; the main point was that mariners should understand the meaning of the sign at once.

(After a short exchange of opinion the Chairman asked for a vote on the proposal to adopt for N° 19 a symbol with a white triangular flag).

(*This proposal was not adopted*).

THE CHAIRMAN submitted to the Committee the proposal which he had already drafted : that the Committee should declare in its report that, although it did not object to the symbols provided under N°s 18, 19 and 20 being adopted, it considered that symbol N° 17, followed by an appropriate legend was better suited, in most cases, to the requirements of mariners.

*(This proposal was put to the vote and adopted).*

**Symbol N° 21. FISH WEIR.**

*(This symbol was adopted without any discussion).*

**Symbol N° 22. FIXED BEACONS.**

ING. HYDROGRAPHE EN CHEF COT (France) (translation) asked whether it were necessary to put a small horizontal line at the bottom of the symbol. Was not the small circle sufficient ?

COMMODORE REINIUS (Sweden) thought that the horizontal line was better than the small circle.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) pointed out that the general principle of showing a definite point by a circle had always been adhered to. The suggested symbol would be a departure from that practice.

COMMODORE REINIUS (Sweden) proposed in this event not to use the horizontal line.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) declared that it would be more natural to keep the horizontal line when the circle was not used, as was the case in N° 23 (floating beacons) but when a circle was used there seemed to be no necessity to keep the horizontal line.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) feared that the suppression of the line might entail some confusion between the two circles in the case of the third symbol given under N° 22.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) suggested that the lower circle should be traced with a thicker line.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) approved this solution, which would enable them to delete the horizontal line.

COMMANDER BJORSET (Norway) stated that it was often impossible to mark either a line or a circle at the bottom of the vertical line, for example when the beacon was placed upon a small rock. It was, therefore, impossible to mention it on the chart more accurately.

THE CHAIRMAN feared that the discussion of this matter might be carried too far. The essential thing was to compile charts which were easy to read, and he personally felt sure that the symbols suggested, as they were employed on British charts, were most satisfactory.

(Symbols provided for under N° 22 were put to the vote. *Four Delegates voted for and three against. The Chairman observed that there were several abstentions).*

Commander Kurze (Germany) declared that the symbols seemed perfectly clear and should therefore be kept as they were.

Minor details were of no importance so long as the symbols were easily recognisable.

Lieutenant-Commander Kusakari (Japan) was in favour of adopting the symbols suggested under N° 22.

Ing. Hydrographe en Chef Cot (France) (translation) thought that it might be possible to reconcile all opinions by adopting the symbols proposed by the Bureau with the option of adding either a small line or a circle to suit requirements. In practice it was impossible to keep too strictly to such details.

Commander Bjorset (Norway) on the contrary had the impression that from the Bureau's point of view, details were of greater importance. He would like to know if the proposal made by M. Cot was acceptable to the Bureau ?

The Chairman asked whether Director de Vanssay de Blavous could throw any light on the subject.

Ing. Hydrographe Général de Vanssay de Blavous (Dir. I. H. B.) (translation) stated that should the Conference decide to adopt either a line or a circle, the Bureau would accept its decision.

Commander Parker (U.S.A.) said that on the American charts beacons are usually indicated by a small black triangle and light beacons by a small star. The position of these beacons, which are very numerous, is frequently moved. The Chart Department declared that it already cost a great deal to keep the charts up-to-date with respect to the changed positions of the beacons. For this reason he was anxious to preserve a symbol which should be as simple as possible for these beacons and on these grounds he had abstained from voting.

The Chairman thought that the solution would be as follows:

> " The Committee declares that it is of opinion that the symbols proposed by the Bureau should be adopted in principle, while leaving the Hydrographic Departments free to modify such symbols in detail as they might think advisable. "

(*This motion was adopted*).

The Chairman stated that it would be desirable to finish Proposal N° 2 this evening, as it was quite evident that it would be impossible to discuss any other proposal.

**Symbol N° 23. FLOATING BEACONS.**

Commander Kurze (Germany) (translation) proposed the adoption of the signs shown under N° 23 subject to the same reservation as had been made by the President with reference to the signs under N° 22.

Lieutenant-Commander Yorgoulis (Greece) (translation) recommended that careful attention should be paid to detail, otherwise some nations might give the same symbol for fixed beacons as other nations used

for floating beacons. Another question of detail was important, namely, that the stem line should be slightly inclined.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) said that as a matter of fact floating beacons were distinguished from fixed beacons by the inclination of the stem of the beacons.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) considered it was consequently necessary to state that, as a general rule, floating beacons should have an inclined stem. Japan showed floating beacons by means of a vertical line.

COMMODORE REINIUS (Sweden) thought that it would not always be possible to keep the vertical line, as beacons are frequently placed in narrow channels where there is not sufficient room on the chart.

THE CHAIRMAN asked the Japanese Delegation whether it would agree to floating beacons being shown on the Japanese charts with an inclined line.

LIEUTENANT-COMMANDER KUSAKARI (Japan) stated that he was prepared to make this concession.

THE CHAIRMAN stated that the British Hydrographic Department would also take this question into account and show floating beacons by means of inclined lines.

He noted that agreement had thus been arrived at with regard to N° 23.

**Symbol N° 24. LIGHT BEACONS.**

THE CHAIRMAN asked if there were any objections to the adoption of the symbol proposed by the Bureau subject to the same reservation as had been made with respect to N° 22.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) asked whether light beacons should be coloured on the charts in the same way as lights ?

THE CHAIRMAN replied that this question did not arise as yet, but would come up later during the discussion.

COMMANDER BJORSET (Norway) declared himself unable to adopt this symbol, since Norway had a different system consisting of a dot which was subsequently hand coloured.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) concluded from this that if the dot were coloured it became a light similar to any other light and therefore the proposed symbol was no longer necessary.

THE CHAIRMAN thought that the general trend of opinion in the Committee was as follows : The countries which showed beacons by means of a dot coloured subsequently did not need this symbol ; the symbol proposed would, however, be of great advantage to those countries which used a special sign.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) proposed that light beacons should be coloured in the same way as lights even in the case of those nations which had so far used a special sign.

The Chairman was under the impression that at present all the countries coloured their lights, whatever their character. The colouring would be placed on the small star if the proposed sign were adopted.

Commander Bjorset (Norway) was not certain whether it were really possible to colour all the light beacons and asked whether the British Hydrographic Department did so.

The Chairman replied in the affirmative.

Ing. Hydrographe Général de Vanssay de Blavous (Dir. I. H. B.) (translation) drew attention to the fact that, whether coloured or not, the mark for the light did not correspond to the actual position of the light. That is to say if the star were coloured the position of the colour would not be the position of the light.

In the circumstances the colour should not be placed on the star but at the foot of the vertical line.

Lieutenant-Commander Yorgoulis (Greece) (translation) considered that the sign might be suppressed in the case of fixed beacons.

After some consideration, however, he withdrew his proposal.

(*The Committee adopted the following proposal : Approval of the symbol shown under N° 24 (Proposals, page 11) it being agreed that the countries which use a different coloured sign should retain such sign*).

**Symbol N° 25. LIGHT BUOYS.**

Commodore Reinius (Sweden) thought that for the sake of uniformity the light should be shown by means of a star and not by a *fleur de lys*. On large scale charts the symbols should include a small circle showing the exact position of the buoy.



(*The proposal of Commodore Reinius was put to the vote and adopted*).

**Symbol N° 26. LIGHT VESSEL WITH SUBMARINE BELL.**

Commodore Reinius (Sweden) proposed that the submarine bell in the symbol should be deleted, as there would always be a legend near to this symbol.

Ing. Hydrographe en Chef Cot (France) and Commander Kurze (Germany) supported this proposal.

(*This symbol was adopted, with the alteration that the bell is to be replaced by a legend*).

Commodore Reinius (Sweden) suggested that the words "submarine bell" be replaced by the words "submarine signal apparatus."

Ing. Hydrographe en Chef Cot (France) (translation) called attention to the fact that some signals were not of the bell type. There were other submarine signals different from sound signals, such as ultra-sonic signals.

CAPTAIN TONTA (Director I. H. B.) (translation) stated that some light vessels carried apparatus both for sound signals and wireless signals. Germany, Sweden and Denmark employed such vessels.

COMMODORE REINIUS (Sweden) withdrew his last proposal.

(*The Committee decided to adopt the symbol after replacing the "submarine bell" by "appropriate legend."*).

**Symbol N° 27. CHIMNEY. - TOWER.**

COMMANDER BJORSET (Norway) remarked that the same question as for N° 7 (Windmill) applied to N° 27. The ideal system would be to show the object in elevation.

THE CHAIRMAN declared that the proposal intended to show the chimney or the tower either by a small circle or in elevation.

(*This proposal was adopted*).

**Symbol N° 28. BENCH MARK.**

THE CHAIRMAN remarked that the proposed sign for Bench mark was not accurately drawn ; the sign was an arrow head below a horizontal line.



ING. HYDROGRAPHE EN CHEF COT (France) (translation), though not wishing to oppose the adoption of this symbol, found it rather complicated. Bench marks were generally indicated on land by a circle with a horizontal bar. This sign was simpler than the proposed symbol which was seldom employed.

THE CHAIRMAN stated that this mark was also employed in Great Britain on land.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) thought that if the symbol proposed by the Bureau had already been frequently employed on many existing charts, it was then better to adopt it.

THE CHAIRMAN declared that this symbol had for many years been employed on British charts.

(*This symbol was adopted*).

(The meeting was adjourned at 5.35 p.m.).

# 2nd MEETING OF THE CHARTS COMMITTEE.

(11th APRIL, 1929).

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The second meeting of the Committee on Charts opened at 2.00 p.m., under the Chairmanship of Captain J.A. EDGELL, O.B.E., R.N., Chairman.

*COMPOSITION OF THE COMMITTEE.*

THE CHAIRMAN informed the Committee that he had asked the Delegates of the Netherlands, Portugal, Italy and Denmark to take part in the work of the Commission. Commodore Ravn was unfortunately unable to attend this afternoon's meeting, but all the other members whom he had named were present.

The members of the Committee were asked to read the Minutes in order to present any comments they might care to make at the beginning of to-morrow's meeting.

## 12a. Translation of Title of Charts.

CAPTAIN TONTA (Director I. H. B.) (translation) explained that it had been hoped to facilitate the use of original charts by adding the translated title, abbreviations and all other information found to be necessary at the back of the chart. This addition would be found very useful, especially for those countries whose language was not widely known. This would make it unnecessary to engrave these additions ; it was sufficient to print them on a slip which should be pasted to the back of the charts already printed.

LIEUTENANT-COMMANDER LUISONI (Argentine Republic) (translation) declared that the Argentine Hydrographic Office had no intention of using any other language but Spanish on its charts.

COMMANDER KURZE (Germany) observed that this seemed to him to be a suggestion that could be adopted as such.

COMMODORE REINIUS (Sweden) thought that the Committee might adopt this proposal.

COMMANDER BJORSET (Norway) appreciated this proposal but feared that it would be impossible to carry it out in Norway where the language question was the cause of great difficulty.

(*The proposal was adopted*).

## 15. Scale of Charts.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) explained that this proposal had been made by Greece in order to facilitate the work of compiling and reading charts and would allow charts to be assembled more easily.

LIEUTENANT-COMMANDER LUISONI (Argentine Republic) (translation) thought that all the States, even those not using the decimal system, could accept the decimal scales.

LIEUTENANT-COMMANDER KUSAKARI (Japan) approved the principle but stated that it would be almost impossible to put it into effect in the Japanese Government Departments, which had already issued a large number of charts.

COMMODORE REINIUS (Sweden) took the proposal to mean that when new charts were being made they should conform as much as possible to the scales indicated in this proposal.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) noted the observations which had just been made and amended the proposal of his country as follows :

" Greece recommends the use *preferably* of decimal scales... ".

COMMANDER BJORSET (Norway) did not believe that the scale of the middle latitude of the charts would always be practicable. When it was desired to assemble several charts one was frequently obliged to take the scale of the latitude of the higher parallel for one of them and that of the lower parallel for the other.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) stated that in order to assemble contiguous charts on Mercator's projection they must be constructed on the scale of the same parallel.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) stated that he would withdraw the second paragraph of the proposal made by his country ; " For charts on Mercator's projection the scale of the middle latitude of the chart. "

CAPTAIN LUYMES (Netherlands) understood that the limit of 1 : 50,000 prescribed by the proposal was due to the fact that at the London Conference it had been suggested that all charts up to this limit should be constructed on Mercator's projection. This proposal had been amended thus : " All charts up to this limit should be generally constructed on Mercator's projection ". This had been adopted owing to the fact that the Netherlands did not employ Mercator's projection for charts of Dutch possessions because these regions were near the Equator.

The Delegate of the Netherlands suggested that the proposal should be thus modified :

> " It is recommended to use decimal scales on all charts. For charts on Mercator's projection, it is recommended that the scale of the latitude of the chart's construction be indicated. "

Ing. Hydrographe Général de Vanssay de Blavous (Dir. I. H. B.) (translation) proposed the following formula : " It is recommended to indicate the latitude at which the scale was measured. "

Captain Tonta (Director I. H. B.) (translation) suggested the following : " It is recommended to indicate the parallel on which the scale was established. "

Commander Parker (U. S. A.) declared that this was the method at present employed in the U. S. A.

The Chairman observed that there was no objection to this proposal.

(*The proposal made by Greece — N° 15 — as amended by the Delegate of the Netherlands and by Director de Vanssay de Blavous was adopted*).

## 16. Insertion of Meridians and Parallels on Charts.

Commander Bjorset (Norway) thought that the Directing Committee's proposal did not call for any remark and proposed that it should be approved.

(*The proposal was adopted*).

## 16a. True Compass Roses.

Lieutenant-Commander Luisoni (Argentine Republic) (translation) stated that the Hydrographic Office of his country inserted in every case true compass roses as also the meridians and parallels. This was an excellent measure both from the point of view of the Merchant Service and the Navy.

Lieutenant-Commander Yorgoulis (Greece) (translation) approved the I. H. B.'s proposal but thought that the use of these true compass roses on transparent paper should only be provisional since the roses printed on the charts are of great importance to seamen.

He proposed that the I. H. B. should inform those States which had not yet conformed to the resolution adopted at London in 1919 that the present Conference would be glad to see them conform thereto.

Captain Romagna-Manoia (Italy) (translation) said that he would like to know the reason why certain countries had not yet included true compass roses on their charts in accordance with the decision which had been adopted.

Ing. Hydrographe en Chef Cot (France) (translation) understood that certain nations did not include true compass roses on their charts since their mariners neither used them nor asked for them. True compass roses were formerly printed on French charts but they were done away with several years ago, without complaint from mariners. At present French seamen used the protractor. There was therefore no need to insert the rose on the charts, and, moreover, it was in the way.

Nevertheless, those nations whose seamen used the rose had it printed on their charts. This was no reason for obliging those nations whose mariners did not use the rose to do likewise.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) asked what would happen if the mariner did not have a protractor.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) replied that if the protractor was formerly a luxury it is no longer the case now. Draughtsmen, surveyors, mathematicians and a large number of mariners possessed a protractor. It was a question of habit.

LIEUTENANT-COMMANDER KUSAKARI (Japan) approved the proposal of the Directing Committee and added that all the Japanese charts bore the rose.

COMMANDER BJORSET (Norway) stated that the Norwegian charts had two roses : a true compass rose and a magnetic rose.

LIEUTENANT-COMMANDER LUISONI (Argentine Republic) (translation) said that was the case also in his country.

CAPTAIN LUYMES (Netherlands) admitted that certain seamen did not use the rose and preferred the protractor. He had ascertained this himself after personal enquiry.

Nevertheless, as the tendency was to render the use of original charts more general, it was advisable not only to take the customs of the seamen of one's own country into consideration but also those of other nations. He would be glad, therefore, if in view of the above consideration the French Hydrographic Office would insert the rose on its charts.

CAPTAIN ROMAGNA-MANOIA (Italy) (translation) seconded this observation.

THE CHAIRMAN noted that the task of the Committee now really consisted in obtaining an assurance from M. Cot that he would have true compass roses inserted on the French charts.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) stated that he was prepared provisionally to accord his preference to the second part of proposal 16a :

> " It is suggested that those countries which do not show a true compass rose on their charts should issue to seamen such roses printed on thin transparent paper, which can easily be stuck on to the charts. "

Should the French Hydrographic Office receive a large number of requests for the rose it would see the need for engraving them ; if on the other hand no such application for separate roses were made, it would refuse to submit to such a heavy and useless expense.

CAPTAIN ROMAGNA-MANOIA (Italy) (translation) was of opinion that as all the Delegates of the countries represented on the Committee had expressed their desire to see the rose included on the charts, this would seem to indicate that the proposal met a real need of mariners.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) replied that in the words of Captain Romagna-Manoia " this would seem to indicate " it ;

the Directing Committee, however, had submitted an alternative proposal, a provisional solution, which he preferred.

THE CHAIRMAN had hoped that the Committee would arrive at a better solution than the one proposed by the Directing Committee. As that appeared difficult, however, he recommended for the time being that the Directing Committee's solution should be adopted, as it might be considered better than nothing at all.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) requested the Chair to put to the vote his proposal that a resolution of the Conference should be communicated to the States which had not yet adopted true compass roses.

(*This proposal was accepted by 7 votes. There were certain abstentions*).

THE CHAIRMAN then invited the Committee to decide with respect to the second part of the proposal :

> " It is suggested that those countries which do not show a true compass rose on their charts should issue to seamen such roses printed on thin transparent paper, which can easily be stuck on to their charts ".

COMMANDER KURZE (Germany) thought that as the first part of the proposal had been adopted the second part now served no useful purpose.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) stated that he differed : in his opinion the second part should not be dropped in case certain countries did not comply with the resolution of the Conference.

COMMANDER PARKER (U. S. A.) did not think that it would always be possible to stick the roses on to the charts without covering some important information.

COMMANDER KURZE (Germany) stated that his country had tried this method of proceedure as regards true compass roses. It did not seem possible to place a rose very accurately by sticking it to the chart. It would be better either to engrave the rose or to leave it out altogether.

COMMANDER PARKER (U. S. A.) seconded this observation.

LIEUTENANT-COMMANDER LUISONI (Argentine Republic) and CAPT. ROMAGNA-MANOIA (Italy) were of the same mind.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) asked whether roses were to be found on the International Aeronautical Navigation Charts.

THE SECRETARY replied that a rose had been provided for on the Aeronautical Charts.

LIEUTENANT-COMMANDER LUISONI (Argentine Republic) (translation) did not see why a rose should be useful for these charts considering that the air-routes were indicated with their number of degrees.

THE CHAIRMAN summing up the situation, observed that the general opinion of the Committee seemed not to be in favour of the proposal (second paragraph), as it considered that loose sheets of thin paper could not be stuck accurately on the chart and would be easily torn.

(*The last phrase of the proposal was rejected*).

(The meeting adjourned at 3.15 p.m.).

# 3rd MEETING OF THE CHARTS COMMITTEE.

(12th APRIL, 1929).

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The third meeting of the Committee on Charts opened at 3 p. m., Captain J.A. EDGELL, O.B.E., R.N., in the Chair.

*MINUTES.*

THE CHAIRMAN invited the members of the Committee to inform the Secretary of the Committee of any corrections they might wish to have made in the Minutes of the First and Second Meetings.

## 19. Indication on Charts of the Direction of the Buoyage of Channels.

THE CHAIRMAN explained that it was proposed to indicate the direction of the buoyage of channels on an inset on the chart. As an example he laid a Danish chart before the Committee to show the method proposed. This system was contemplated more particularly for complicated cases.

CAPTAIN LUYMES (Netherlands) asked whether the inset would be obligatory or whether it would be permitted also to show the direction of the buoyage by means of arrows on the chart itself.

ING. HYDROGRAPHE GÉNÉRAL DE VANSSAY DE BLAVOUS (Dir. I. H. B.) (translation) reminded the Committee that arrows are generally used to indicate the directions of currents. An arrow of special design would therefore have to be used to indicate the directions of buoyage.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) was of opinion that when there was only one coloured buoy the chart should state on which side of the buoy a vessel should pass.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) pointed out that the marking on the chart or in a corner of the chart of the direction of the buoyage would give information to the mariner possessing a knowledge of the customs of the country but not to the foreign seaman. The matter appeared to him to be of individual interest to each country rather than an international question, since every foreign navigator would have to consult the Sailing Directions.

CAPTAIN TONTA (Dir., I.H.B.) and the SECRETARY informed the Committee that the Genoa Conference had contemplated the international unification of buoyage in accordance with the system most generally in use to-day. that is on the basis of the Washington system. It would be necessary on this account to introduce a slight change in the proposal made by Greece.

Lieutenant-Commander Yorgoulis (Greece) (translation) explained that the Greek proposal merely tended to indicate on the charts as clearly as possible whether the red buoy should be left on the right or left side when entering. The following notes might be inserted on the charts : " Petrograd system " or " Washington system " ; " Red Buoy on the left " or " Red Buoy on the right. "

The Chairman thought that the system suggested by Greece was liable to create a risk of confusion and in any case its adoption would revolutionise the present procedure.

Commander Parker (U.S.A.) pointed out that on the American charts. in the case of channels both ends of which were open to the sea, the direction in which a vessel was considered as coming from seaward was indicated.

Commodore Ravn (Denmark) stated that lateral buoyage was indicated on Danish charts and further a note was inserted in the insets in a corner of the charts stating the direction in which a mariner was considered as coming from seaward. Further, the shape, colour and distinctive lettering of each buoy to port and starboard were indicated.

Lieutenant-Commander Luisoni (Argentine Republic) (translation) thought he was able to accept the proposal on condition that the indication of the direction of buoyage be mentioned in the inset containing the title and other general information. Mention should also be made in the same place of the direction in which vessels are to be considered as coming from seaward.

(*The proposal of the Directing Committee was adopted*).

The Chairman proposed the following addition to the text which had been adopted : —

> " When the scale of the chart permits and when the intricacies of the channels require it, a note conspicuously placed on the chart shall give conclusive information on the direction of the buoyage. "

(*This proposal was adopted*).

## 44. Use of the International Ellipsoid.

Lieutenant-Commander Kusakari (Japan) approved the proposal of the I.H.B. in principle; the Japanese Office had, however, employed Bessel's ellipsoid since 1922 and it would be difficult to change.

Captain Tonta (Director I.H.B.) (translation) drew the attention of the Japanese Delegate to the last words of the Bureau's proposal : "... whenever the obligation of using earlier works is not an obstacle to this use "

(*The proposal was adopted*).

## 45. Adoption of a uniform length for the sea-mile.

THE CHAIRMAN invited the members of the Committe to read at the same time Proposal N° 45 on page 5 of the Supplement to the Proposals.

CAPTAIN TONTA (Director I.H.B.) (translation) explained that the proposal to adopt a uniform length for the sea-mile had its origin in the fact that in certain countries this unit had not yet been fixed and this might give rise to disputes, for instance in shipbuilding.

THE CHAIRMAN noted that no objection had been raised to the adoption of 1852 metres as the length of the international sea-mile.

(*Adopted*).

## 6. Symbols to denote compulsory seaplane landing-places on marine charts and some other matters concerning Aeronautics.

At the suggestion of the CHAIRMAN, the Committee decided to examine only the first paragraph of the Bureau's proposal, in view of the fact that it had been agreed that the second paragraph should be discussed at the same time as Proposal N° 8.

THE CHAIRMAN feared that the adoption of this proposal (paragraph 1) would tend to overload the charts.

CAPTAIN LUYMES (Netherlands) pointed out that the draft stated :

" .... *wherever possible,* a pair of wings be added of the symbols..."

(*The proposal was adopted, exclusive of the second paragraph, discussion of which was reserved*).

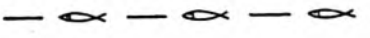
## 8. Various Limits.

LIEUTENANT-COMMANDER KUSAKARI (Japan) laid on the table a schedule giving the opinion of the Japanese Delegation concerning various aeronautical symbols.

At the suggestion of the CHAIRMAN, the Committee proceeded to examine first the symbols proposed by the I.H.B. for various limits.

### *SYMBOLS PROPOSED BY THE I.H.B.*

**1. LIMITS OF FISHING ZONES.**



COMMODORE RAVN (Denmark) stated that the Government of Iceland had requested that the limits of fishing zones should be shown on the Danish

charts for Iceland, and the Danish Hydrographic Office had therefore applied to the I. H. B. and invited it to submit a sign. This was the sign now proposed to the Committee by the I.H.B. He was not entirely satisfied, as it took some time to draw and was not very practical for curved lines.

Commander Kurze (Germany) agreed that this symbol was rather difficult to draw, but it was nevertheless the best of all suggested. Moreover, there was no necessity to draw the fish so close to one another. He would suggest leaving a space of about 10 centimetres between each fish.

In reply to a question put by the President, Commander Kurze declared that fishing limits had no connection with territorial limits. The limits to which they alluded were the same as those indicated by the Danish Government on charts for Iceland.

Commodore Ravn (Denmark) stated that the fishing limit was not the same as the territorial limit.

Commander Parker (U.S.A.) pointed out that the question which really concerned the Committee was not to decide whether this limit should be shown on charts but rather to state whether a country should employ this symbol when it wished to indicate this limit.

(*Symbol 1 was adopted*).

**2. LIMITS OF AIR PORTS.**

—⌄—⌄—⌄—

Captain Tonta (Director I.H.B.) (translation) informed the Committee that Commander Brivonesi, who was unable to attend the meeting, had asked him to suggest in his name that the pair of wings be replaced by another design, representing an airplane.

Commander Kurze (Germany) (translation) would prefer to adopt the pair of wings.

Captain Tonta (Director I.H.B.) (translation) observed that the pair of wings had been already adopted for symbols concerning aviation. He preferred — and the I.H.B. was of the same opinion — to keep the pair of wings as the symbol for aviation.

(*Symbol 2 was adopted*).

**3. MARITIME LIMITS IN GENERAL; RESERVED AREAS, DUMPING GROUNDS, COTIDAL LINES, LINES OF THE TURN OF CURRENTS, Etc.**

(fine lines 12 m/m in length).

The Chairman suggested that this question should be postponed until the question of lines of equal depth had been settled.

Commander Kurze (Germany) did not think there was any need to fear confusion between these lines and the lines of equal depth, as these were polygonal lines which could not be confused with the lines of equal depth.

THE CHAIRMAN admitted the justice of this remark but feared nevertheless that there was a possibility of confusion particularly in crowded areas, more specially with the limits of light sectors.

COMMANDER KURZE (Germany) pointed out that if they were to wait for the question of the lines of equal depth to be settled perhaps there would no longer be a line easy to draw available for these limits.

*(Symbol 3 was adopted).*

## *SYMBOLS PROPOSED BY THE GERMAN DELEGATION.*

The Committee began the examination of the three signs proposed by the German Delegation.

1. ———————— Frontiers of Countries.
2. x——x——x——x Limits of Sovereignty. (Limits of Territorial
3. ++++++++++ Customs Frontiers. Waters).

THE CHAIRMAN observed with reference to the first sign that the following symbol had just been adopted for the frontiers of countries on the International One Millionth Map.

—·—·—·—·—·—

COMMANDER KURZE (Germany) did not think that this line could be used for hydrographic charts since it might be confused with a line of equal depth.

It was essential to show frontiers on hydrographic charts as the frontier was the limit of sovereignty, fishing zones, etc...

COMMODORE REINIUS (Sweden) replying to a question put by the Delegate of France, stated that in his country frontiers were marked on the charts by a line of small crosses.

LIEUTENANT-COMMANDER YORGOULIS (Greece) (translation) observed that this system offered the advantage that it could be used on the sea as well as on land without creating confusion with the lines of equal depth.

THE CHAIRMAN said that care was taken on British charts to mention that the indication of frontiers was only approximate, as this question of international boundaries on water had already caused complications and it was desirable to avoid possible further difficulties.

COMMANDER BJORSET (Norway) observed that these territorial limits were in reality very precise.

LIEUTENANT-COMMANDER LUISONI (Argentine Republic) (translation) asked what the German Delegation meant by "Limits of Sovereignty".

COMMANDER KURZE (Germany) stated that he meant the limit of territorial waters.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) pointed out that this limit was frequently less precise than the limits of countries.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) drew attention to the fact that many charts nevertheless showed this limit with a note to the effect that it was not guaranteed as exact.

Commander Parker (U.S.A.) exhibited the symbol used in the United States for the frontiers of countries :



Commander Kurze (Germany) proposed that the Committee should first decide whether it intended to adopt three distinct symbols for the frontiers of countries, limits of territorial waters and Customs frontiers respectively.

Lieutenant-Commander Yorgoulis (Greece) (translation) thought that one sign would be sufficient.

Commander Parker (U.S.A.) was inclined to accept the German proposal. In Alaskan waters, for instance, it was extremely important for seamen to know whether they were in British or American waters.

The Chairman asked the members of the Committee if they were agreed as to the advisability of adopting three distinct symbols.

Lieutenant-Commander Kusakari (Japan) proposed that the question should be referred for examination to the Sub-Committee appointed to consider Proposal 24a.

*(The proposal of the Japanese Delegate was put to the vote and rejected).*

The Chairman stated that the Committee was in favour of adopting three distinct symbols.

Commodore Reinius (Sweden) suggested that the symbol — a line of crosses — shown under N° 3 of the German proposal be adopted for international boundaries.

For territorial waters he would propose the symbol employed at present on American charts :



Commander Kurze (Germany) (translation) observed that this symbol was too much like those indicating contour lines. He still thought that the symbol proposed by the German Delegation was the best.

Commander Parker (U.S.A.) did not press the adoption of the American symbol. He had not even suggested that it should be adopted.

*(The Committee decided to accept the* President's *suggestion — that a Sub-Committee be appointed to suggest symbols for each of the three limits concerned).*

The President appointed Commodore Reinius, Captain Luymes and Commander Kurze on this Sub-Committee.

(The meeting adjourned at 4.45 p.m.).

# 4th MEETING OF THE CHARTS COMMITTEE.

(15th APRIL, 1929).

The fourth meeting of the Committee on Charts opened at 2.30 p.m., the Chairman, Captain EDGELL, O.B.E., R.N., in the Chair.

## 2. International Uniformity of Symbols.

**2. OBSERVATION SPOT (Proposals, page 9, last line).**

THE CHAIRMAN recalled that when discussion had first been opened on this subject, the Delegates had been rather impeded by the fact that no symbol had yet been fixed to indicate wireless stations. This symbol had now been accepted.

LIEUTENANT-COMMANDER LUISONI (Argentine Republic) (translation) suggested that the symbol chosen by the London Conference for indicating observation spots should be adopted. It was highly inconvenient to have a continuous change of symbol.

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COMMODORE REINIUS (Sweden) seconded this proposal, which was put to the vote and *adopted*.

## 8. Various Limits.

THE CHAIRMAN recalled that a Sub-Committee had been appointed to study this question and make suggestions.

COMMODORE REINIUS (Sweden) handed to the Delegates the schedule of proposals which was presented by the Sub-Committee :

+ - + - + - + - + - + "International Boundary

+ + - + - + - + - + - + Limits of Sovereignty (territorial waters)

+ + + + + + + + + + Customs Boundary

(The horizontal line of the cross should be twice or three times as long as the vertical line in order to distinguish this symbol from the one indicating sunken rocks)."

The Delegate of Sweden added that another proposal had also been made to provide the two following lines for indicating limits of ports : x x——x x——x x—— and limits of roadsteads : x——x——x——x

The Chairman felt doubtful as to the advantage there would be in adopting straight away the two new symbols suggested for indicating limits of ports and of roadsteads. A certain number of charts already bore the indication of these limits and it would be a costly process to alter the symbols for them.

Commodore Reinius (Sweden) suggested that the question of the two symbols should be referred to the I.H.B. for further consideration in consultation with National Services.

(*This proposal of the Swedish Delegate was adopted*).

(*The symbols suggesetd by the Sub-Committee for International Boundaries, Limits of Sovereignty — limits of territorial waters — and Customs Boundaries were adopted*).

## 22. Method of Insertion of Echo-Soundings on Charts. Adoption of a Standard Velocity for the Propagation of Sound in Sea Water.

The Chairman considered that it was a question on which opinion had not yet become concrete. It would probably be necessary to refer the decision to the next Conference.

He suggested that the proposal made by the I.H.B. should first be studied.

"*a*) that the soundings obtained by echo be plotted on charts after having been corrected as much as possible".

Commander Kurze (Germany) pointed out that when taking depths with the wire, one always employed the same unit of measure, the fathom for instance. When taking echo-soundings it would be desirable to employ one fixed unit of measure. There would no longer be any corrections to make in the figures obtained.

Commander Bjorset (Norway) asked the meaning of the words "corrected as much as possible."

The Chairman replied that the three chief corrections were those relative to temperature, salinity and density.

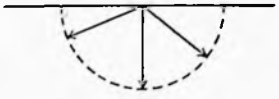
Captain Luymes (Netherlands) recalled that corrections which could be made to figures given by echo-sounding were obtained by experiments made in the propagation of echo on the surface; one could not be sure that the propagation of echo in deep waters, on account of high pressure, followed the same laws as on the surface of the waters.

Should corrections be made as progress is being realised in this domain, the result would be that soundings obtained at different periods would show a different degree of accuracy.

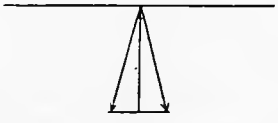
To this should be added the difference of calibrating between the apparatus employed. It was 1490 in Germany and 1463 for the Admiralty pattern.

The Delegate of the Netherlands would therefore favour the German proposal, which would allow a unification of calibrating and bring greater unity into the soundings obtained.

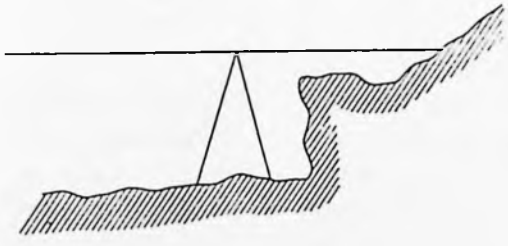
He would point out that according to the opinion of two engineers who had made experiments in the channel on board a Dutch ship, the energy of sound seemed to spread not equally in a hemisphere,



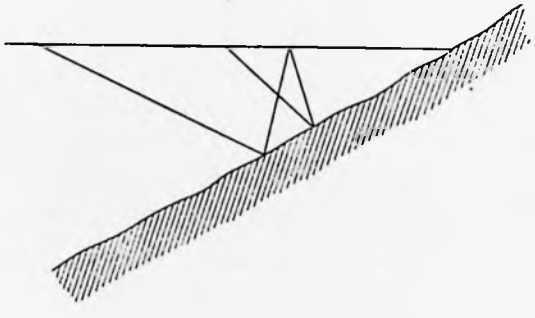
but, for the greater part, only in the inside of a fairly narrow cone of which the upper angle would be from 20 to 30 degrees.



The echo would therefore be returned by the ground inside the cone but not with sufficient intensity to generate a sound in the receivers by the parts of bottom which are outside the cone.



In a case where the bottom forms with the horizontal an angle exceeding 15 degrees, the echo would therefore not come back to the point of departure.



Experience seems to have shown, in fact, that an echo was not received from such sloping bottoms.

The result was contrary to Dr. Maurer's theory and to the difference he established between depths and echo distances. According to this theory, errors determined by echo-sounding may be calculated not to exceed 3% and thus would not be greater than when wire sounding was employed. If this theory be true the difference established by Dr. Maurer between depths and echo distances could therefore be ignored.

With regard to the proposal made by the Chairman to refer this question to the Hydrographic Bureau for further consideration, the Delegate of the Netherlands observed that if the Conference now came to a decision on the way in which soundings should be shown, it might be ahead of time, but if it were to wait two and a half years for it, there was a risk that it would be behind the times and find soundings based on unknown corrections, indicated on charts.

Captain Tonta (Director I.H.B.) observed that the only way to verify the accuracy of echo-sounding was by means of wire-soundings. Experience had taught him that wire-sounding yielded results less accurate than echo-sounding. It could not be said that formulae established for the correction of echo-velocity in the vertical were accurate but perhaps they are very near the truth; such is the case for all physical formulae, they are based on mere hypothesis.

Concerning the measurement of mountain heights, Captain Tonta observed that in more than half the cases topography was based upon a barometric formula which was altogether hypothetical. The odds were much in favour that the formula might be correct but one could not assert that it was so. If geographers had waited to have a very accurate formula with regard to barometric heights maps would now show a much smaller number of altitudes for mountain tops.

Now, the formula generally employed to determine the heights of mountains was a great deal more hypothetical than the one used for echo-sounding ; by dividing the sea into layers, in each of which there was a constant pressure, a formula was obtained which proved wholly sufficient for the needs of the mariners for whom the charts were drawn.

Captain Tonta repeated that no comparison was possible except with a geometrical measure. Now the geometrical measurement of sea depths could only be obtained by means of wire-sounding.

It should not be forgotten that perfection was often the enemy of good. The good, to a mariner, was to know the depth of the sea as well as could be determined by the means at present employed. If one were to wait for science to reach perfection, it was probable that one would wait for centuries. Hence he was content with making the best possible corrections. It was the solution adopted by physicists and topographical expeditions.

Commander Kurze (Germany) considered that corrections were not so necessary to echo-soundings as to the measurement of heights by means of barometrical pressure. All that was needed really was an average normal velocity of sound. One could apply every desirable correction to scientific charts but what was most important to the mariner was to have a chart easy to use.

Commander Parker (U.S.A.) had interpreted somewhat differently the wording, "after having been corrected as much as possible." He had thought that it signified that corrections relative to temperature and salinity should only be made when available.

Commander Parker's Office was opposed to Commander Kurze's system. It believed in making corrections whenever they could be made and that it was necessary in all cases to give figures as accurate as possible.

The methods at present available for echo-sounding yielded results which, from the point of view of accuracy, were comparable with those obtained from wire-sounding. These methods of echo-sounding were used by all American hydrographic vessels, which made all necessary corrections. Seamen, however, were not in a position to make these corrections. A slight difference occurred, consequently, between the results which they obtained themselves and those inserted on the charts. Despite all this, however, the charts would be made as accurate as possible.

If it were desired to adopt Commander Kurze's system one might go further and instead of showing depths in metres or fathoms, seconds might be used.

If, with respect to the various soundings, the standard velocity used were shown it would be possible, in proportion as progress was made in these methods of calculation, to correct the depths shown by these soundings.

Commander Parker agreed with the observation made by Captain Luymes as to the absence of echo in the case of a steep incline in the bed of the sea. It was then necessary to resort to the old method of wire sounding. That, however, was fairly rare.

COMMODORE REINIUS (Sweden) agreed with Commander Kurze and Captain Luymes and supported the proposal put forward by the Japanese Delegate. It was quite correct that hydrographic vessels and warships had at their disposal means for making the necessary corrections. The majority of other vessels, however, did not possess these means and as a rule the mariner was content to read the depth shown on the dial of his instrument. It frequently happened, for example, that at moments of danger or during the night he needed the information at once and had not time to make any corrections.

In the present state of knowledge on this subject it was advisable to make a certain number of corrections and probably in two or three years, when science had achieved yet further progress, it would be necessary to make even more corrections. These would, in fact, become more and more numerous.

It might also happen that after having carried out echo-soundings in a certain zone it might be necessary to make soundings a few years later in another zone overlapping the first zone. In that case the results might be slightly different and fresh corrections would be necessary.

On these grounds he supported the observation made by Captain Luymes and Commander Kurze and agreed with the Japanese proposal.

LIEUTENANT-COMMANDER LOPES (Portugal) (translation) accepted the proposal of the Bureau with the following addition.

> "That the soundings obtained by echo be plotted on charts after having been corrected as much as possible, the percentage of maximum uncertainty of those soundings being shown in the title of the chart."

On behalf of Great Britain, the CHAIRMAN desired to say a few words concerning soundings in shallow waters (not exceeding 120 fathoms).

By shallow water soundings are meant those which are made with the shallow water gear, usually graduated to show depth directly, in depths of less than about 120 fathoms. Such soundings are shown on the large scale coastal charts primarily to help the seaman to fix his position when making the land. There is no doubt that for a long time to come the lead line will be the ultimate standard of reference here in all kinds of vessel, and indeed many types of craft will probably not be fitted with the echo gear. It is therefore necessary that the soundings shown on the chart should agree as closely as possible with what would be obtained by a perfect cast of the lead, that is, with the truth. If soundings differing much from this were shown on the chart it could not fail to lead to distrust both of the charts and of the echo gear. If the temperature and salinity are known a surveying ship can easily calculate her soundings to the true depth. The British Admiralty is using for the purpose its own "Tables of the Velocity of Sound in Pure Water and in Sea-Water for use in Echo Sounding and Sound Ranging." The temperature and salinity are already known with sufficient accuracy in the approaches to many ports, and additional information is being received continually.

The shallow water gear is graduated to show depths directly on the assumption of an arbitrary velocity of sound. Its indications will therefore be in error as a rule, and in some places the error may be large enough to need correction. In such cases a Notices to Mariners should be issued. The British Admiralty for instance has issued a notice to the effect that navigational soundings made in the Red Sea with echo sounding machines graduated on the assumption of a standard velocity of 4,800 feet per second should be increased by 5 per cent. This is probably the largest correction that will be required anywhere in the world.

The British Admiralty therefore proposes to correct all echo soundings as much as possible.

CAPTAIN LUYMES (Netherlands) replying to Captain Tonta, stated that with the formulae for computing the velocity of sound for echo-soundings it was necessary to extrapolate to a very large extent. Experiments had been made with pressures up to perhaps 100 atmospheres, but none had been carried out under conditions which gave data for pressures anything like 800 atmospheres.

With regard to the further suggestion to indicate depths in seconds instead of metres, Captain Luymes did not think it practical, as mariners who had to change suddenly from 200 metres to 10 or 15 seconds would experience a certain surprise which would inevitably cause confusion.

With regard to soundings in shallow waters, the Netherlands Delegate did not think that corrections were very essential in view of the fact that in depths of 200 metres, for instance, there would perhaps be a difference of only 4 metres.

He concluded by stating that if the German proposal for the adoption of a standard velocity in deep waters were unacceptable, it might be possible

to accept a standard velocity as a basis for the calibration of instruments, since the German instruments now have a calibration of 1490, whilst the Admiralty pattern is calibrated at 1463, a difference of 27 metres.

LIEUTENANT-COMMANDER KUSAKARI (Japan) said that in Japan it was considered difficult to obtain accurate corrections, and it was thought that when it became necessary to change the methods of correction a new edition of the charts would have to be issued.

THE CHAIRMAN pointed out that the proposal submitted by Captain Luymes for the calibration of the instruments was contrary to paragraph *c)* of the draft proposed by the Bureau.

CAPTAIN LUYMES (Netherlands) stated in reply that this was correct, but his suggestion referred solely to the adoption of a figure for the calibration of instruments.

CAPTAIN TONTA (Director I. H. B.) asked Captain Luymes if he thought that a velocity of 1490 was the most satisfactory as a rule. He recalled that the Annalen der Hydrographie und Maritimen Meteorologie had recently published a most interesting article by Dr. Maurer, who had published soundings, taken more particularly in the Emden Deeps, corrected by means of the United States tables. He had reached depths of 10,000 metres with pressures as stated by Captain Luymes. Dr. Maurer stated that, for the requirements of Oceanography, one should be satisfied to reduce the natural echo distances to true echo distances by employing the local true velocity of sound as nearly as it can be determined.

COMMANDER KURZE (Germany) thought that instead of 1490 metres, 1500 metres might prove acceptable for the standard velocity. He considered that this would be a practical basis which could be corrected subsequently. With regard to Dr. Maurer's article and the information given therein, the Emden depths have been corrected as much as possible purely with regard to scientific interest and not for the interest of navigators. He was of opinion that the adoption of a standard velocity for all countries would dispose of many disadvantages in the compilation of charts.

THE PRESIDENT put proposal *a)* made by the Directing Committee to the vote.

> " *a)* that the soundings obtained by echo be plotted on charts after having been corrected as much as possible. "

(*Proposal* a) *of the Directing Committee was adopted*).

The Committee then proceeded to discuss Proposal *b)*.

> " *b)* that no distinction be made from the other soundings or that, should such distinction be made, it should be only by the type of figures with a reference in the title of the chart. "

THE CHAIRMAN asked whether soundings should be distinguished according to the methods employed to obtain them.

COMMANDER PARKER (U.S.A.) pointed out that in the United States echo-soundings were used for all depths over 15 fathoms and the conviction prevailed that this method yielded very satisfactory results. The tendency to

employ this system was increasing and soon the majority of soundings would be effected by these means. In these circumstances he thought that no distinction should be made on charts between echo and other soundings.

The Chairman stated that Commander Parker's suggestion would result in Proposal *b*) reading as follows :

> " That they should not be distinguished from other soundings marked on the chart. "

(*Proposal* b) *was adopted thus amended*).

The Committee then proceeded to discuss Proposal *c)*.

" *c*) that a standard velocity of sound through sea-water be not fixed until new experiments have been made giving this velocity more accurately and tables of correction have been drawn up for calculating it, according to the different conditions of sea water."

Commander Kurze (Germany) objected to this suggestion and proposed a standard velocity of 1500 metres.

The Chairman put Commander Kurze's amendment to the vote.

(*The amendment was not adopted*).

(*This decision entails the adoption of proposal c*).

The Chairman did not think that the work of the Charts Committee would be finished to-day. At his suggestion the examination of Article 23 was postponed to the next meeting and the Committee then proceeded to discuss Articles 24, 24a and 29a, which refer to Aeronautical Charts.

## 24. Aeronautical Charts. Coastal Charts to be used in Air Navigation, published by Hydrographic Offices.

The Chairman proposed that the whole question should be referred for examination to a Sub-Committee which should come to an understanding with Mr. A. Roper, Secretary General of the International Commission on Air Navigation. This Sub-Committee would place itself in communication with Admiral Niblack who took a deep interest in these problems.

(*The proposal to appoint a Sub-Committee was adopted*).

The Chairman called on Mr. Roper inviting him to explain the question of aeronautical charts.

Mr. A. Roper (International Commission on Air Navigation) reminded the Committee that the question had been dealt with at great length in a questionnaire which had been circulated among the members some time before the present session.

He gave a brief summary of the question. When in 1919 certain Governments first entertained the idea of drafting an International Convention on Air Navigation, all the main aspects of the matter were dealt with,

including the question of aeronautical charts. The International Commission on Air Navigation provided for two kinds of charts, general charts and standard charts.

Until now the Commission had confined itself to improving the system adopted in 1919. An endeavour had been made to establish the symbols and conventional signs to be inserted on aeronautical charts. The work was being carried on in different countries, several of which had prepared charts — Great Britain 8, France 7, etc...

It had been noticed that certain countries hesitated to undertake great expenditure on these charts, which they did not consider essential. The International Commission on Air Navigation had instituted an enquiry on this subject.

He expressed the opinion that to make use on aeronautical charts published by Hydrographic Offices of symbols different to those employed by the International Air Commission would entail inconveniences. This Commission did not pretend of course that the symbols which they employed were perfect and should any authoritative body recommend better ones than those already chosen, they would not hesitate to revise the decision made three years ago.

If the International Commission on Air Navigation and the International Hydrographic Bureau united in whole-hearted collaboration, it would be possible to reach an agreement so that navigators should no longer suffer from contradictory decisions.

ING. HYDROGRAPHE EN CHEF COT (France) (translation) pointed out that as regards aeronautical charts, there was a point on which the Conference could come to an agreement with the International Commission on Air Navigation : that was in the method of indicating lights. He had had to write legends for lights on some aeronautical charts, making use of the symbols shown in the pamphlet which had been distributed to members of the Conference and he had noticed that this method of noting the characters of lights was very different from that usually followed for marine charts. It would therefore be necessary to come to an agreement on this subject.

COMMANDER KURZE (Germany) thought that there were two questions to consider :

1. that of the type of coastal charts ;
2. that of the symbols to be employed.

He showed the Delegates samples of prepared charts in which an endeavour had been made to give seaplanes the information which they needed concerning depths and to indicate to them the places where they would find sufficient water.

THE CHAIRMAN thought that all these questions might usefully be considered by the Sub-Committee. He asked which Hydrographic Services were interested in aeronautical charts and had begun to issue them.

COMMANDER BJORSET (Norway) declared that his Government had decided to accept any decision that might be made by the Conference with regard to Aeronautical Charts. Norway did not wish to make any decision different from those taken by the Conference.

With regard to the use of colours, the Delegate of Norway thought that it would be very important always to employ the same colours for the same things.

This observation applied to land maps rather than to marine charts.

The Chairman appointed as members of the Sub-Committee Ing. Hydrographe en Chef Cot (France), Commander Parker (U. S. A.), Commander Kurze (Germany) and Admiral Herrero (Spain). He invited the Sub-Committee to co-operate with Mr. A. Roper.

The next meeting of the Committee on Charts would be held tomorrow at 2.30 p.m.

(The meeting adjourned at 4.20 p.m.).

# 5th MEETING OF THE CHARTS COMMITTEE.

(16th APRIL, 1929).

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The 5th meeting of the Committee on Charts, opened at 2.30 p.m., the Chairman, Captain EDGELL, O.B.E., R.N., in the Chair.

## 23. Collation and Publication by the International Hydrographic Bureau of all Oceanic Soundings. Method of recording Echo-Soundings. General Bathymetric Chart of the Oceans.

THE CHAIRMAN submitted to the Committee the three proposals made by the Bureau and suggested examining them in the following order : first, third and second.

(*Adopted*).

THE CHAIRMAN noticed that according to the Comment of the Bureau, the adoption of the first proposal (Collation and Publication by the I. H. B. of all oceanic soundings obtained by echo) would not entail extra work.

COMMODORE REINIUS (Sweden) suggested that the Bureau should be entrusted with the collation of the information on soundings obtained outside continental shelves.

COMMANDER PARKER (U.S.A.) supported the proposal which had been submitted and thought that it might be worth the experiment. He was otherwise fairly pessimistic as to the value of information obtained by this method because he did not think that anyone not very experienced in the matter could obtain accurate results with the apparatus available. He added that one of the chief functions of his Office was to demonstrate the inaccuracy of information given by people who were not hydrographers.

However, he considered the experiment to be worth the trouble and he was of opinion that it should be made.

COMMANDER BJORSET (Norway) shared Commander Parker's opinion.

(*Proposal N° 1 was adopted*).

PROPOSAL N° 3.

(*Keeping up-to-date by the I.H.B. of the General Bathymetric Chart of the Oceans*).

CAPTAIN LUYMES (Netherlands) would favour the adoption of the Bureau's proposal though the work in view did not really concern the activities of the Hydrographic Bureau. It was a question of oceanography rather

than of hydrography. However, he would willingly accept the proposal out of respect to the memory of the great oceanographer, Prince Albert of Monaco, who had taken such a lively interest in the creation, the organisation and the development of the I.H.B.

Commodore Reinius, Commander Kurze, Commander Parker, Commander Miura and Lieutenant-Commander Luisoni seconded the idea put forward by Captain Luymes.

The Chairman understood that the Committee thought the Bureau's proposal on this subject should be adopted, on condition that the decision made in these very exceptional circumstances should not serve later as a precedent for entrusting the Bureau with work which did not come within its scope.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) pointed out that there existed a French edition only of the General Bathymetric Chart of the Oceans. Now, the Statutes of the Bureau provided that all publications should be issued in both English and French. He considered, therefore, that the Committee should state whether it wished an English edition to be issued. This edition would not be very costly as only a certain number of names would have to be changed.

The Chairman was not under the impression that an English edition of the chart would be very necessary to Great Britain.

Rear-Admiral Herrero (Spain) (translation) was of the same opinion as regards his country.

Commodore Reinius (Sweden) suggested that the question of deciding whether an English edition of the bathymetric chart should or should not be issued should be referred to the next Conference, and that the French edition, concerning which a decision had just been taken, should be kept to for the present.

Lieutenant-Commander Luisoni (Argentine Republic) (translation) supported the suggestion made by Commodore Reinius.

(*This suggestion was not adopted*).

Ing. Hydrographe en Chef Cot (France) (translation) was of opinion that this question only interested the Delegates who employed the English language on their charts and he did not think that the countries using French need take part in the discussion.

Commander Parker (U.S.A.) stated that this chart would only be of use to specialists who would be able to use a chart compiled in French.

The Chairman put to the vote paragraph 3 as amended, namely, with the proposal that the English edition was not considered necessary.

(*Paragraph 3 thus amended was adopted*).

The Chairman opened the discussion on paragraph 2 of the I. H. B. proposals (Type of record to be adopted). As far as he was concerned, after studying the two types of records proposed, he thought that the model submitted in Annex II (A) could be adopted. He would, however, be glad to have the opinion of the members of the Conference on this point.

COMMANDER PARKER (U.S.A.) preferred Annex I, which he considered more complete and which did not contain useless information. Nevertheless, he drew the attention of the Conference to Items A and B in column 5. He would like to hear the views of the other Delegates as to the advisability of adopting either of the suggested methods.

CAPTAIN LUYMES (Netherlands) desired to know the exact meaning of the term " Reduced Sounding " in column 15 of Annex II (A).

THE SECRETARY believes that the meaning of this expression is the sounding reduced to the chart datum, in other words the vertical depth.

CAPTAIN LUYMES (Netherlands) did not believe this information would be very useful. Where great depths are concerned, differences due to tides are only of minor importance with reference to depth.

LIEUTENANT-COMMANDER LUISONI (Argentine Republic) (translation) stated that the Argentine Hydrographic Office considered that, in so far as the use of the forms submitted to the Conference for examination is concerned, each Office should make such proposals as are consistent with the improvements which it thinks necessary to make.

COMMODORE REINIUS (Sweden) (translation) supported this proposal.

THE PRESIDENT (translation) thought that, in any case, the type of record adopted will only be provisional.

CAPTAIN LUYMES (Netherlands) (translation) asked whether, if the proposal suggested by the Argentine Delegate be adopted, there would be a different form for each country. The work of the International Hydrographic Bureau would be made much easier if there were a uniform type of record for soundings.

CAPTAIN TONTA (Director I.H.B.) (translation) drew the attention of the Committee to the third schedule entitled " Short type of record. " This schedule contained a wide column headed " Remarks. "

Seamen liked simple schedules. In practice they would prefer model N° 3. Those who desired to add further details could do so in the "Remarks" column. He was convinced that the first three columns would be found adequate for all the information received. The main thing was to adopt a uniform model and arrangement for the most useful data. Any further details could then be entered in the " Remarks " column. It would be inadvisable to give the impression that they desired to introduce anything in the nature of a complicated return. Let the seaman complicate matters if he wished, but he must be given the simplest possible schedule. The third model seemed best adapted for this purpose.

COMMANDER KURZE (Germany) thought that Annex II (B) sufficed for merchant vessels.

LIEUTENANT-COMMANDER LUISONI (Argentine Republic) (translation) agreed with Director Tonta.

THE CHAIRMAN asked Lieutenant-Commander Luisoni. if that meant that he withdrew his proposal.

LIEUTENANT-COMMANDER LUISONI (Argentine Republic) (translation)

replied that in his opinion it should be left to the discretion of the Offices to do what they considered advisable.

Commodore Reinius (Sweden) thought that the schedule in Annex I was the best for hydrographic vessels and warships. This table might be modified in the light of subsequent experience.

He thought on the other hand that the table in Annex II (B) was quite adequate for merchant vessels.

Commander Parker (U.S.A.) was of opinion that, as regards the work done by hydrographic vessels, it should be left to the discretion of the national Hydrographic Offices to draw up the model form, and in these circumstances the Committee should deal exclusively with the forms to be issued to other vessels. He considered that Annex II (B) was the best for this purpose.

He pointed out, nevertheless, that in all probability a mariner would not give more information than asked for in the form. Consequently if further data were required it would be advisable to make the form more explicit.

Ing. Hydrographe General de Vanssay de Blavous (Dir. I. H. B.) (translation) thought it might be possible to fulfil the two suggestions which had been put forward by adopting the simplest model and adding a small supplementary form containing a request that the temperature, density and other data should be given whenever possible. The adoption of two distinct forms mihht perhaps make the mariners' task easier.

Commander Parker (U.S.A.) and Lieutenant-Commander Yorgoulis (Greece) supported the solution suggested by Ing. Hydrographe General de Vanssay de Blavous.

The Chairman submitted the following draft resolution which appeared to him to express the Committee's opinion :

> "The Annex II (B) be adopted for general purposes and in particular for use by the Mercantile Marine, but the various Hydrographic Offices should, for the present, use such forms as they think best suited for the purpose.
>
> "A note to be added at the foot of Annex II (B) stating that additional data (salinity, density and temperature at the surface, etc.), if available will be useful."

Captain Luymes (Netherlands) asked if it would not be advisable to say that the salinity and temperature at the surface and at certain depths should be given when possible.

The Chairman replied that he did not think this would be useful in the case of merchant vessels.

Captain Luymes (Netherlands) agreed with the President that merchant ships would not stop to carry out these experiments but he did not think the surface salinity and temperature useful.

Commander Parker (U.S.A.) was of opinion that even if merchant vessels gave the surface and bottom temperature this would not give them the

means of ascertaining the average temperature for the whole depth of the soundings, since this temperature decreased rapidly at first but subsequently far less rapidly.

CAPTAIN LUYMES (Netherlands) held that, in that case, one might require them to give the salinity and temperature at the surface, so that the meaning of the figures used would be clearly understood.

(*The Chairman's proposal as amended by Captain Luymes was adopted*).

THE CHAIRMAN stated that, with the exception of the questions referred to the Sub-Committee, the agenda of the Committee on Charts was now terminated.

(The Committee rose at 3.15 p.m.).

# REPORT OF THE CHARTS COMMITTEE.

The Committee on Charts examined the following questions on the agenda entrusted to them by the Conference.

N$^{os}$ 2 — 12$^{a}$ — 15 — 16 — 16$^{a}$ — 19 — 44 — 45 — 6 — 8 — 22 — 23 and 24 — 24$^{a}$ — 29$^{a}$.

Minutes of meetings have been distributed to each Delegate to the Conference.

The Chairman asked the Delegates of Argentine, Netherlands, Portugal, Italy and Denmark to take part in the work of the Committee, in addition to those who had already been selected.

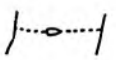
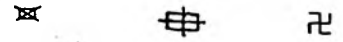
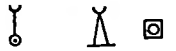
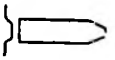
Lieutenant-Commander YORGOULIS (Greece) attended the Committee in the place of Commander RASIKOTSIKAS (Greece).

The Committee reports as follows : —

## N° 2. *INTERNATIONAL UNIFORMITY OF SYMBOLS USED ON ALL HYDROGRAPHIC CHARTS.*

It was agreed that further discussion should not be given to the symbols under N$^{os}$ 1 to 25 (pages 8 and 9 of the Proposals) since they had been definitely approved by the London Conference 1919.

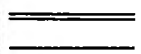
The Committee proposed to the Conference to adopt the following symbols as suggested by the International Hydrographic Bureau (see second list, pages 9, 10 and 11 of the Proposals 1929) :

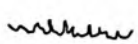
1. mine, quarries 
3. ferry 
4. church (large scale and small scale charts) 
5. temple, pagoda 
6. mosque, minaret, marabout 
7. windmill  also in elevation thus 
9. fort 
10. battery 
11. dry dock 

12. patent slip (large scale charts) 

13. floating dock 

14. leading line ——·····—— (ships should not proceed on the dotted line).

15. course or channel recommended 

16. ice limit 

17. any kind of station (*fixed*) ⊙

21. fish weir 

27. chimney, tower o or in elevation 

28. bench mark 

The Committee adopted the symbol :

8. water mill 

The Committee did not oppose the three symbols given by the International Hydrographic Bureau under N°

18 Semaphore 

19 Signal Station  and

20. Telegraph Station  , but they were of opinion that symbol N° 17 ⊙ (any kind of station — fixed) followed by an appropriate legend would best suit the requirements of seamen.

Concerning N° 22: - *Fixed beacons* — and N° 23: - *Floating beacons,* the Committee was of opinion that the symbols proposed by the Bureau should be adopted in principle, while leaving the Hydrographic Departments free to modify such symbols in detail as they may think advisable.

*Floating beacons* should be distinguished from the fixed beacons by being sloped instead of vertical.

The Committee approved of the symbol proposed by the International Hydrographic Bureau under N° 24, *Light Beacons*, it being agreed that the countries which use a coloured sign should retain such sign.

25. *Light Buoys :* - The Committee adopted the following symbol :



The light should be shown by means of a star. On large scale charts the symbols should include a small circle showing the exact position of the buoy.

26 *Light vessels with submarine bell :* — The proposed symbol was amended : the bell shown under the symbol was suppressed and replaced by an appropriate legend.

Concerning 2. *Observation spot :* — The Committee suggested to adopt the symbol : —



already approved by the London Conference, 1919.

## *N° 12a. TRANSLATION OF TITLE OF CHARTS.*

The Committee was of opinion to adopt the proposal of the International Hydrographic Bureau : —

> " If the translation into English or into French of the title and of the more important information required for reading the chart cannot be inserted on the chart, it should be printed on a slip and pasted on the back of the chart. "

## *N° 15. SCALE OF CHARTS.*

The Committee suggested the following recommendation : —

> " It is recommended to use decimal scales for all charts. For charts on Mercator's projection, it is recommended that the scale of the latitude of the chart's construction be indicated. "

## *N° 16. INSERTION OF MERIDIANS AND PARALLELS ON CHARTS.*

The Committee adopted the proposal made by the International Hydrographic Bureau : —

> " A sufficient number of meridians and parallels should be drawn on all charts published by Hydrographic Offices, whatever the scale or system of projection may be, so that it may always be possible to place a position on the chart by its geographic co-ordinates. "

## *N° 16a TRUE COMPASS ROSES.*

It was proposed that the International Hydrographic Bureau should inform those States which had not yet adopted the resolution voted at

London in 1919 that the present Conference would be glad to see them conform thereto.

(*This proposal was accepted by 7 votes. There were certain abstentions*).

The Chairman then invited the Committee to decide with respect to the second part of the proposal :

> " It is suggested that those countries which do not show a true compass rose on their charts should issue to seamen such roses printed on thin transparent paper, which can be stuck on to their charts. "

The Chairman summing up the situation, observed that the general opinion of the Committee seemed not to be in favour of the proposal made by the International Hydrographic Bureau (second paragraph), as they considered that loose sheets of thin paper could not be stuck accurately on the chart and would be easily torn.

(*The last phrase of the proposal was rejected*).

## *N° 19. INDICATION ON CHARTS OF THE DIRECTION OF THE BUOYAGE OF CHANNELS.*

The Chairman explained that the intention is to show this indication on an inset on the chart, as used on certain Danish charts.

The Committee proposed, as suggested by the International Hydrographic Bureau, that the Conference recommends that this indication should be used on large scale charts whenever it is possible or advantageous.

> " When the scale of the chart permits, and when the intricacies of the channels require it, the direction of the buoyage of channels should be indicated on an inset on the chart. "

A note conspicuously placed on the chart will give conclusive information on the system of buoyage used.

The Committee on Charts agreed to supplement thus this proposal :—

> " When the scale of the charts permits, and when the intricacies of the channel require it, a note conspicuously placed on the chart shall give conclusive information on the system (direction) of buoyage used. "

## *N° 44. USE OF THE INTERNATIONAL ELLIPSOID.*

The Committee proposed that the suggestion made by the International Hydrographic Bureau be adopted : —

> " That the Conference express a wish in favour of the use of the International Ellipsoid for hydrographic purposes whenever the obligation of using earlier works is not an obstacle to this use."

## *N° 45. ADOPTION OF A UNIFORM LENGTH FOR THE SEA MILE.*

The Committee proposed that the suggestion made by the International Hydrographic Bureau be adopted : —

> " The length represented by 1852 times that of the international prototype of the metre shall be called the International nautical mile. "

## *N° 6. SYMBOLS TO DENOTE COMPULSORY SEAPLANE LANDING-PLACES ON MARINE CHARTS AND SOME OTHER MATTERS CONCERNING AERONAUTICS.*

The Committee adopted the proposal made by the International Hydrographic Bureau : —

> " The Bureau proposes that the next Conference should decide that, wherever possible, a pair of wings be added to the symbols and that it would seem advantageous to indicate that these objects are reserved for aircraft. "

## *N° 8. VARIOUS LIMITS.*

The Committee proposed to the Conference the adoption of the following symbols : —

1. Limits of fishing zones — ⊲ — ⊲ — ⊲
2. Limits of air ports — ⌄ — ⌄ — ⌄ —
3. Maritime limits in general :

   Reserved areas, dumping grounds
   Cotidal lines, lines of the turn of currents, etc...

   ——— ——— ———
   (fine lines 12 m/m in length).

The Committee recommended the adoption of three different symbols for " frontiers of countries ", " limits of territorial waters " and " Customs frontiers "

International Boundary + + + + + + + + + + +

Limits of Sovereignty (territorial waters) + + — + + — + + — + +

Customs Boundary + — + — + — + — + — +

The study of two new symbols for Limits of Ports and Limits of Roadsteads is referred to the International Hydrographic Bureau.

*N° 22. METHOD OF INSERTION OF ECHO-SOUNDINGS ON CHARTS. ADOPTION OF A STANDARD VELOCITY FOR THE PROPAGATION OF SOUND IN SEA WATER.*

The Committee adopted the following proposals : —

a) " that the soundings obtained by echo be plotted on charts, after having been corrected as much as possible. "

b) " that they should not be distinguished from other soundings marked on the chart. "

An amendment having in view the adoption of a standard velocity for propagation of sound through sea water was not adopted by the Committee.

*N° 23.* 1. *COLLATION AND PUBLICATION BY THE INTERNATIONAL HYDROGRAPHIC BUREAU OF ALL OCEANIC SOUNDINGS.*

2. *GENERAL BATHYMETRIC CHART OF THE OCEANS.*

3. *METHOD OF RECORDING ECHO-SOUNDINGS.*

1. The Committee decided :

" that the International Hydrographic Bureau is to be entrusted with the collation of information concerning all soundings taken outside of the continental shelves. "

2. The Committee approved the proposal of the International Hydrographic Bureau concerning the General Bathymetric Chart of the Oceans :

" that the Bureau be charged with the keeping up to date of the General Bathymetric Chart of the Oceans, of which the 'Cabinet Scientifique du Prince Albert de Monaco' has just drawn up the second edition ",

it being understood that this is to be done as a special case and not to be regarded as a precedent for future work of a similar nature.

An English edition of the chart is not considered necessary.

3. As concerns the method of recording echo-soundings, the Committee is of opinion that : —

" Form Annex II (B) " (page 38 of the Proposals 1929) be adopted for general purposes and in particular for the use of Mercantile Marine, but the various Hydrographic Offices should, for the present, use such forms as they consider best suited for the purpose.

A note is to be added at the foot of the form, Annex II (B), stating that additional data such as surface salinity, density, temperature, *etc.*, if available, will be useful.

*N° 24. AERONAUTICAL CHARTS. COASTAL CHARTS TO BE USED IN AIR NAVIGATION PUBLISHED BY HYDROGRAPHIC OFFICES.*

The Chairman proposed that the whole question including questions N° 24ª and 29ª of the Supplementary Proposals should be referred for examination to a Sub-Committee which should come to an understanding with Mr. A. Roper, Secretary General of the International Commission on Air Navigation. This Sub-Committee would place itself in communication with Admiral Niblack who took a deep interest in these problems.

*(The proposal to appoint a Sub-Committee was adopted).*

The Report by the Sub-Committee is submitted herewith to the Plenary Session.

## Appendices to the Report of the Charts Committee.

### I. *REPORT OF THE SUB-COMMITTEE ON AERONAUTICAL CHARTS.*

The Sub-Committee which had been appointed(1) has taken cognizance of the documentation collated by Admiral Niblack, of the study he published in Hydrographic Review, Vol. V. N° 2, and of the Tabulation drawn up by him relative to the various symbols advocated or in use in different countries on air-charts.

The Sub-Committee has heard a statement made by Admiral Niblack and has examined various types of air-charts published nowadays by different countries.

The Sub-Committee has proceeded with the study of questions N°ˢ 24, 24ª and 29ª submitted to it.

Leaving aside the international air-charts, the Sub-Committee *has solely considered the special coastal air-charts published by the Hydrographic Offices,* such as those which have been published up to now by the U. S. Hydrographic Office and by the French Hydrographic Office.

(1) Composition of the Sub-Committee :

| | | |
|---|---|---|
| *Chairman :* | Commander KURZE ..... | *Germany.* |
| *Members :* | Ing. Hydrographe en Chef COT.. | *France.* |
| | Admiral HERRERO ..... | *Spain.* |
| | Commander PARKER ..... | *U.S.A.* |
| | Mr. A. ROPER ..... | *I.C.A.N.* |
| *Secretary :* | Lieutenant-Commander BENCKER. | *I.H.B.* |

Answering the question brought up under N° 24 in the International Hydrographic Bureau's comments, the Sub-Committee has thought that, owing to the present conditions of aerial navigation, these charts ought rather to approach in character that of land maps, completing them as regards the coastal features.

The Sub-Committee decided to refer back to the International Hydrographic Bureau the examination of these charts, using the material supplied by the members of the Sub-Committee (American coastal chart, German composite chart, French chart Provence-Corse) and the information which the Bureau may procure.

The Sub-Committee has thought that it would be of interest to standardise as far as practicable and as soon as possible the common symbols used jointly on air-charts and on special coastal charts drawn up by the Hydrographic Offices for aerial navigation and on marine charts.

In particular, the best method should be sought for inserting on charts for airmen's use all of the coastal lights, making a clear distinction between maritime and aeronautical lights.

*With this object in view, the Sub-Committee proposed to refer back to the International Hydrographic Bureau these various studies, the results of which will be communicated to the International Commission for Air Navigation (I. C. A. N.).*

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## II. *REPORT OF THE SUB-COMMITTEE ON CONTOUR LINES.*

This Sub-Committee proposed *that the Bureau should be requested to carry out a new and full examination of this question and to submit new proposals to the States Members.*

The Sub-Committee suggested that the following indications be given to the Bureau for their study.

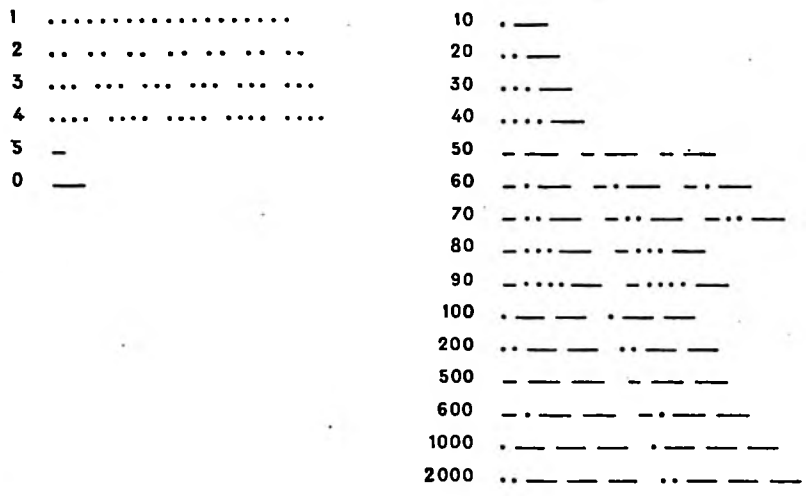
1. The Sub-Committee has realised, firstly, that great latitude should be reserved to the Hydrographic Offices concerned as to the number of contour lines to be placed on the charts. They should employ only those which they consider useful, but should, *if possible,* select them in accordance with the uniform system of lines which will be adopted.

2. The Sub-Committee adopted the expression "*general danger line*" to denote, not a contour line, but a fixed line, enclosing a part of the sea which mariners should avoid altogether (whatever the draught of water of their ship) on account of the great number of obstacles to navigation. It adopted the symbol which is already used by Great Britain and several other nations for this line ; that is to say, a line of dots.

3. The Sub-Committee did not consider it necessary to establish a special line to represent each metre of depth between 20 and 50 metres, but it has found that it would be of interest, either for submarine navigation or for fixing of position by sounding, to show some details of the relief between 10 and 20 metres by means of special contour lines which do not correspond

to tens of metres. Moreover, admitting the principle that each country will only use those lines which seem to it the most convenient, no inconvenience can be caused by allowing for a greater number of symbols.

After having adopted the above mentioned points, the Sub-Committee (1929) proposed that the Conference will deliver to the Bureau these points and the new table of symbols for depth contours hereafter with recommendations. The Sub-Committee was anxious to emphasise that the above given proposals for depth contours must only be regarded as a recommendation for further study.



# C. COMMITTEE ON THE WORK OF THE BUREAU.

*LIST OF MEMBERS OF THE COMMITTEE :*

*Chairman :* J.L.H. LUYMES (*Netherlands*).

| | |
|---|---|
| CABALLERO Y LASTRES, Captain | *Peru.* |
| H.E. NAPIER TOMLIN PASHA | *Egypt.* |
| PARKER, Commander | *U. S. A.* |
| ROMAGNA-MANOIA, Captain | *Italy.* |
| YONEMURA, Rear-Admiral | *Japan.* |

*Secretary :* Lieutenant-Commander H. BENCKER (*I.H.B.*).

# SOLE MEETING OF THE COMMITTEE ON DOCUMENTS.

(16th April, 1929).

The meeting opened at 3.20 p.m.

On the proposal of Lieut.-Commander Lopes (Portugal) and Commander Saillant (France), Captain Hooykaas (Netherlands) was elected Chairman and Captain Claussen (Germany) Vice-Chairman of the Committee.

## 29. Notation for Distinguishing the Characteristics of Lights.

The Chairman opened the discussion on the proposal made by Greece.

Commander Saillant (France) (translation) thought this proposal might serve a useful purpose. But he was not in favour of replacing the characteristics indicated in the Light Lists by the number referring to the proposed table but rather of completing these characteristics by the same number and thus allowing a control of the physiognomy of light.

Captain Claussen (Germany) did not know whether the proposal tended to the insertion in Lists of Lights of a schedule of characteristics of lights of the whole world or only of lights of the countries interested. In the first case, it was probable that more than sixty physiognomies of lights would be found, which made the figure far too high to be practical.

He thought moreover it was essential for the mariner not to have to refer to several pages in the Light List ; he should be able to find the characteristics of the light on the same page to which he had to turn in order to ascertain the position of the vessel.

Professor Tenani (Italy) (translation) suggested that the numeration to be employed in these tables should not only be an ordinary one but a numeration in which each figure or letter should have a meaning and correspond to a colour number of light, or of occultations, etc., in order to provide a first accurate indication as to the characteristics of lights.

Lieut.-Commander Day (Great Britain) stated that Great Britain's point of view was the same as Captain Claussen's, namely that to compel mariners to refer to a supplementary publication would entail complications.

The Chairman also did not agree with the Greek Delegate and thought that his proposal entailed complications and disadvantages. He was personally satisfied with the present method of designating lights on charts.

COMMANDER RASIKOTSIKAS (Greece) (translation) explained the reasons which had determined the Greek Government to make this proposal. The abbreviations employed to indicate characteristics of lights were not understood by everybody. Considering that it was difficult to give diagrams and characteristics of lights on charts, he thought that it would be better to have them indicated on a schedule posted on the bridge, so that the officer of the watch could always have it within his reach and be able to recognise the lights at first glance.

It was on account of the difference of characters printed in various languages that it would be necessary to alter characteristics in Light Lists and abbreviations on charts. It was difficult, if not impossible, for a foreigner who had no knowledge of Greek printed characters, to decipher the Greek Light Lists. This complication would not exist if Latin characters were employed.

He added that the total number of physiognomies of lights would not exceed 60.

CAPTAIN TONTA (Dir. I. H. B.) pointed out that the words which rendered the adoption of the Greek proposal most difficult were : " that abbreviations of the lights *be replaced,* etc. ". Whenever there was anything to alter in hydrographic matters, there were always difficulties. The chief aim was not to replace something on charts or in Light Lists, but to add, if possible (as translation was not always possible) a column in international language (figures or Latin characters) as was suggested by the Greek Delegation.

Instead of " replacing " it would be advisable to add in the Light Lists, if possible, a column in which, besides the ordinary indication, numbers would be given referring to the tables of " Physiognomy ".

COMMANDER RASIKOTSIKAS (Greece) (translation) stated that Greece was doing everything possible to put the Greek edition of the Light Lists at the disposal of all mariners.

LIEUT.-COMMANDER LOPES (Portugal) agreed with the statement just made by Director Tonta. It would perhaps be advisable to endeavour to reach an agreement on this point with the Sub-Committee on Aeronautical Charts.

CAPTAIN CLAUSSEN (Germany) pointed out that if a supplementary column were added to the Light Lists, it would greatly increase the size of that List, which was a thing to be avoided.

COMMANDER RASIKOTSIKAS (Greece) (translation) replied that the Light List would not be made bulky by the simple insertion of a figure above the abbreviations and by the addition of one or two pages at the beginning of the book.

The Delegate of Greece suggested moreover that the words : " if possible " be added in order to indicate that this was not held to be obligatory.

THE CHAIRMAN thought that the application of this proposal consisting of altering the abbreviations of lights would entail for Hydrographic Offices a labour wholly out of proportion to the services rendered. He feared moreover that this would be incurring a risk.

*(The motion against the Greek proposal was put to the vote and rejected).*

CAPTAIN TONTA (Dir. I. H. B.) stated that certain questions had to be decided categorically. There were, however, other problems where it might be useful to suggest solutions the application of which was optional. In this manner general agreement would gradually be attained.

In this particular case the States which so desired were given facilities to disseminate their publications more widely.

COMMANDER RASIKOTSIKAS (Greece) (translation) submitted a draft table which, he stated, was of course subject to amendment.

In order to facilitate the adoption of the Greek proposal he suggested that paragraph *c*) should be drafted as follows : —

> *c*) " That the number in the above table corresponding to the " physiognomy " should be added to the abbreviations of the characteristics indicated in the Light Lists ".
>
> This would only be done in the Light Lists and not on the charts.
>
> (*Paragraph* c) *was adopted by 5 votes against 3, as amended by Commander Rasikotsikas*).

CAPTAIN CLAUSSEN (Germany) suggested that the I. H. B. should be instructed to prepare a table of all the existing " physiognomies " and allot a number to each.

> (*The proposal of the Delegate of Germany was adopted*).
>
> (*Paragraph* b) *was adopted by 6 votes with the addition proposed by the Delegate of Germany*).
>
> (*Paragraph* a) *was put to the vote and adopted — 5 votes in favour*).

## 31a. International Code Book of Signals.

COMMANDER SAILLANT (France) (translation) stated that according to the second paragraphe of N° 31ª, " the first two paragraphs in Proposal 31 were no longer valid ". The third paragraph, however, was not mentioned. The I. H. B. might be invited to provide further information concerning the third paragraph at a subsequent meeting.

THE CHAIRMAN reminded the Committee that the subject under discussion was the new I. H. B. proposal, N° 31ª.

LIEUT.-COMMANDER LOPES (Portugal) was of opinion that the publication of these lists by the I.H.B. was useful; if discontinued, they should be replaced by another publication, apart from the Light Lists in which each country should insert the lists in question. To his mind, it was essential that every Office should print these data in the same publication, with a view to attaining the desired uniformity ".

THE CHAIRMAN was of opinion that this publication would be superfluous. Where too many publications existed it might happen that a certain number would not be kept up to date.

THE SECRETARY stated that it had been Admiral Niblack's suggestion to issue this publication and to propose to the national Offices that they should omit these data from their own publications.

PROFESSOR TENANI (Jtaly) (translation) objected to the I. H. B. proposal for the reasons given by the Chairman. He thought this question was outside the scope of the I.H.B.

THE SECRETARY stated that one of the reasons which had led the Bureau to make this proposal was the difficulty experienced in establishing a list of Life Saving Stations. The lists drawn up by the different countries were far from complete ; this was chiefly due to the fact that these stations were not under the authority of the same administration.

As a result of a bulky correspondence, the I.H.B. had succeeded in drawing up and issuing a complete list that had just been brought up to date. The work necessitated by its preparation had been so complicated that it was thought it would be best to send it out as a Special Publication rather than to insert the information in the Sailing Directions, which entailed corrections every time any modifications in this list became necessary.

THE CHAIRMAN thought that these lists should be kept in the Sailing Directions. This at least was the opinion of the Netherlands and if the I.H.B. published further lists, the data they contained would nevertheless be inserted in the Netherlands' Sailing Directions. His view was that the Sailing Directions were kept more up to date than the I. H. B. publications.

> " He suggested that the proposal of the Bureau be rejected and that the Committee should express the opinion that the information enumerated be maintained in the publications of the National Hydrographic Offices ".

PROFESSOR TENANI (Italy) (translation) observed that the experience with reference to the Lists of Life Saving Stations had occurred at a critical period, just after the war. This perhaps had prevented a normal development and was probably one of the reasons why the Sailing Directions were not always as complete on this point as could be desired.

CAPTAIN CLAUSSEN (Germany), COMMANDER SAILLANT (France) and COMMODORE RAVN (Denmark) supported the observations made by the Chair.

THE CHAIRMAN put to the vote the motion he had submitted which appeared to receive the approval of his colleagues.

(*Agreed*).

THE CHAIRMAN stated that as Admiral Niblack was interested in this question of the lists of Life Saving Stations, etc., he had thought it advisable to give the reasons which had led the Committee to reject the Bureau's proposal. In consequence he proposed the insertion of the following text which would be submitted by the Committee to the next Plenary Session.

> " The main reason for the rejection of the Bureau's proposal was the necessity for obviating as much as possible that the same subject should be treated in different publications as this nearly always gave rise to contradiction.
>
> " The obvious effect of the I.H.B. proposal would be to cause the omission of these data from the Sailing Directions. All the Delegates seemed to be strongly opposed to the idea of not including this information in their publications.

"If, in the past, it had been proved sometimes that this information was not sufficiently ample better care would be taken in the future. The Members, however, refused to delegate a part of their work to the I. H. B.

"As long as the ideal of a World Hydrographic Office using a common international language had not been attained each national Hydrographic Office would desire to make its own publications as complete as possible. The I. H. B. publications should remain things apart. There was already quite sufficient work for the I. H. B. to do.

"This publication for the whole World offers a further disadvantage, namely, the volumes issued are frequently too bulky for mariners. A mariner sailing in the Mediterranean took no interest in data relative to the coast of Alaska. But he desired that the data requisite for his purpose should be as concise as possible. The number of the necessary books must be as small as possible.

"On the other hand, considering the enormous amount of work embodied in the Special Publication concerning Life Saving Stations of the World, etc., and in view of the many details contained therein which certain Hydrographic Offices do not think necessary to insert in their Sailing Directions and further having regard to the fact that this Special Publication already exists, the Committee is not of opinion that this publication should be dropped but hopes, on the contrary, that it will be kept up to date".

COMMANDER SAILLANT (France) (translation) agreed with the President's suggestion and added that in accordance with the information he had gathered this list of Life Saving Stations had a fairly wide sale. It was, therefore, a source of income to the Bureau.

THE CHAIRMAN stated that he was referring to the principle involved.

## 33a. Notices to Mariners - Summer Time.

THE CHAIRMAN thought that this proposal would not meet with any objections.

None of the Delegates having asked to be allowed to speak, the Bureau's proposal was put to the vote.

(*The proposal was unanimously adopted*).

## 36b. Mention of Original Charts in Notices to Mariners.

THE CHAIRMAN stated that it appeared to him rather too early as yet to raise this question, and considered that it might be postponed to the next Conference.

The Chairman put to the vote a motion for postponing this question until the next Conference.

(*This was adopted*).

## 40. Overlapping of Hydrographic Publications.

COMMODORE RAVN (Denmark) said he did not see the point of the proposal since every time a correction had to be made the Notices to Mariners gave a list of the publications in which such corrections should be inserted.

THE CHAIRMAN agreed that it was for the National Hydrographic Offices to take care, by means of the Notices to Mariners, that nothing was overlooked.

He stated in reply to a remark by CAPTAIN CLAUSSEN that not only adjoining charts, properly so called, would be indicated, but also those which overlapped, subject to their not being on very different scales.

CAPTAIN CLAUSSEN (Germany) thought it would be sufficient to indicate overlapping charts in the same way as adjoining charts, properly so called. It would be enough to mention the numbers of the charts.

THE CHAIRMAN suggested that a separate vote should be taken on (*a*), (*b*) and (*c*).

COMMANDER SAILLANT (France) (translation) said that if the Committee was in agreement concerning the Bureau's proposal, he saw no need for a separate vote on each of the three paragraphs. It was only when the Committee did not approve the proposals submitted to it that a separate discussion on each of the three points should be held.

CAPTAIN CLAUSSEN (Germany) seconded this motion.

THE CHAIRMAN put the Bureau's proposal to the vote.

(*The proposal was unanimously adopted*).

## 41. Non-Official Publications.

CAPTAIN CLAUSSEN (Germany) and COMMODORE RAVN (Denmark) intimated that they favoured the adoption of paragraphs *a*) and *b*) but that paragraph *c*) was rather a question of policy and should be omitted.

THE CHAIRMAN asked if a large number of unofficial publications were issued in the various countries.

CAPTAIN TONTA (Dir. I. H. B.) (translation) replied that only a very few firms published charts but that unhappily these were in frequent use. They were to be found in nearly all merchant vessels.

The most extraordinary things were to be seen on these charts. Thus for example the tracks followed by merchant vessels which were practically always the same were drawn in Indian ink. This was an antiquated line of thought which must be abolished. Italy had recently passed a law compelling

the captain of merchant vessels to use charts published by the responsible national official Departments.

He agreed with Captain Claussen with respect to the deletion of paragraph *c*). This was a question of policy which was outside the scope of the Conference.

LIEUT.-COMMANDER DAY (Great-Britain) pointed out that the British Hydrographic Office had no power to prevent private firms from publishing these charts and that it was not even always able to warn navigators against their use.

THE CHAIRMAN asked on what grounds the captains of merchant vessel preferred the unofficial charts. He presumed that it was not only a question of cheapness.

CAPTAIN TONTA (Dir. I. H. B.) explained that one or two unofficial charts were sufficient for a merchant ship where 10 or 15 Hydrographic Office charts would be necessary.

THE CHAIRMAN thought that the Hydrographic Offices should turn their attention to the possibility of publishing more practical charts than those at present issued for the use of ships.

The Netherlands also were not in a position to take measures against the use of unofficial charts, but were reduced to making every effort in this direction by means of recommendations to the Shipping companies to cease using them. No sanctions, however, were possible.

It was not always the masters of ships who bought these charts but rather the shipping companies.

The Chairman thought that in the present state of the question it would be advisable for the Committe to confine itself to paragraph *a*) of the Bureau's proposal.

CAPTAIN TONTA (Dir. I. H. B.) was of the same opinion. The Hydrographic Offices would of course make every effort to put into effect all recommendations dealing with the problem as a whole.

CAPTAIN CLAUSSEN (Germany) stated that German Naval Courts proceeded against all navigators who met with an accident after using unofficial publications.

PROFESSOR TENANI (Italy) (translation) said that this was also the case in Italy.

THE CHAIRMAN put paragraph *a*) to the vote.

(*Paragraph* a) *was unanimously adopted*).

THE CHAIRMAN put paragraph *b*) to the vote.

(*The following was the result of the voting : 4 votes in favour, 4 votes against. — The Chairman abstained from giving his casting vote*).

CAPTAIN TONTA (Dir. I. H. B.) pointed out that the substance of paragraph *b*) was already embodied in paragraph *a*).

(*Paragraph* c) *was rejected by 7 votes*).

## 42. Dissemination of Nautical Information.

THE CHAIRMAN invited Director Tonta to explain the grounds on which this proposal was based. He had read it through himself with great care and had come to the conclusion that it was superfluous, since the Hydrographic Offices would naturally co-operate in the dissemination of nautical information.

CAPTAIN TONTA (Dir. I. H. B.) reminded the Committee that this proposal originated in 1926. He had not studied it himself. It was due to the initiative of Admiral Niblack who was not attending the present Conference.

The United States Hydrographic Office issued a large number of forms or questionnaires on which mariners were invited to enter their observations. Unfortunately this system was not widespread and many seamen did not recognise its importance.

He thought that the object of the proposal was to initiate propaganda among mariners and induce them to collect and forward as much data as possible during their voyages.

THE CHAIRMAN held that this recommendation was already expressed in a general and sufficiently precise manner in the Sailing Directions.

CAPTAIN TONTA (Dir. I. H. B.) thought that perhaps the proposal had not been very happily drafted. The aim in view was the maximum amount of propaganda in order to induce the Merchant Marine, ships' captains, pilots and navigators in general to collect all the data likely to interest the Hydrographic Offices.

(*The proposal was put to the vote and unanimously adopted*).

## 43. Unification of the International Notations for Latitudes, Longitudes, etc...

THE CHAIRMAN thought that this question did not concern the Hydrographic Offices, at least in his own country. He thought that seamen took no interest in the question. He was not in favour of the proposal.

CAPTAIN CLAUSSEN (Germany) and LIEUTENANT-COMMANDER DAY (Great-Britain) agreed.

(*The proposal was unanimously rejected*).

## 46. Geographical Terms used on Charts and in Sailing Directions.

THE CHAIRMAN regretted the temporary absence of Commander Rasikotsikas, because he thought that this proposal, made before the publication of the Abridged Manual of Symbols and Abbreviations, was now obsolete.

CAPTAIN CLAUSSEN (Germany) (translation) was of the same opinion.

THE CHAIRMAN suggested that the Committee should report to the Plenary Conference that it considered this proposal to have become useless.

CAPTAIN TONTA (Dir. I. H. B.) observed that the question had in fact been solved by the publication of the book of abbreviations and symbols.

(*Proposal N° 46 was rejected*).

THE CHAIRMAN repeated his regrets at the absence of Commander Rasikotsikas during the discussion of item N° 46 of the Agenda. He regretted above all that the proposal had not been properly understood. The point under consideration was the issue of a small technical dictionary for the use of hydrographers in view of the difficulties occasioned by terms which were not sufficiently precisely defined, (for instance, the meaning of the words Straits, Channel, Passage, etc...).

The Chairman added that such a publication would meet with numerous obstacles as in the first place, hydrographers themselves were not agreed as to the exact meaning of several terms. It would therefore be preferable in case of doubt to fix the exact scope of the terminology by correspondence between colleagues rather than to instruct the Hydrographic Bureau to undertake such a work, particularly as it would always encounter certain difficulties in giving the exact definition of several words.

CAPTAIN TONTA (Dir. I. H. B.) (translation) declared that the Bureau had already taken this question into consideration and had quickly come to the conclusion that the preparation of a vocabulary giving the signification of the words would be inadequate ; it would be necessary to add the many meanings which were accepted for the words. This represented a linguistic accomplishment beyond the reach of hydrographers. The question was in any case premature.

COMMANDER SAILLANT (France) (translation) supported the view of the Chairman that this work would be out of proportion to the result in view.

(*The Chairman again invited the members of the Committee to state their opinions. Proposal N° 46 was rejected*).

## 47. Standardisation of luminous Time-Signals.

THE CHAIRMAN emphasised the necessity of adopting a system of time signals, which is as simple as possible, as was suggested by the Bureau. It would be a good thing to complete the proposal by providing that luminous time-signals should be made three times per diem, in order to help ships which left early or came in late.

COMMANDER SAILLANT (France) (translation) pointed out that the proposal of the Bureau already provided for this.

PROFESSOR TENANI (Italy) (translation) suggested that the word " exact " should be replaced by the word " indicated ". However the word " exact " could remain if it did not signify the complete hour.

He would also suggest deleting the last words of the paragraph, " which ought to coincide with a complete hour of Greenwich ".

THE CHAIRMAN considered that it would be better to keep the expression " complete hour ".

LIEUT.-COMMANDER LOPES (Portugal) (translation) recommended the adoption of the Bureau's proposal.

THE CHAIRMAN emphasised the advantage of giving signals at complete hours. He considered that the Italian proposal, if adopted, would entail a drafting modification of the paragraph.

CAPTAIN TONTA (Dir. I. H. B.) suggested adding the words " if possible " to the Italian amendment.

CAPTAIN CLAUSSEN (Germany) (translation) suggested the following amendment : to replace " ... remain alight up to the exact hour " by " the signal should terminate at the exact hour ". This modification signified that it was not necessary for the lamps to remain alight during all the time provided.

(*The Italian amendment was adopted by 6 votes*).

In consideration of this decision the Chairman thought that the drafting of this article should be altered on the basis of the principle adopted.

The Chairman announced that he would put to the vote the German amendment replacing " remain alight " by " the signal should terminate ".

THE SECRETARY GENERAL pointed out the various efforts which had been made to simplify this system of signals, especially in Germany where, after extensive experiments, a system had been adopted which was considered to be perfect.

The essential thing to mariners was to know the exact hour at which signals terminated. It would be possible to give satisfaction to Captain Claussen by stating : " ... the lamps shall be lit five minutes before the exact hour and the signal shall end at the indicated hour ".

CAPTAIN CLAUSSEN (Germany) accepted this amendment.

THE CHAIRMAN stated that Captain Claussen's amendment now read as follows : —

> " The lamps shall be lit five minutes before the hour indicated and the signal shall end at the hour indicated ".

(*The amendment was adopted*).

It was agreed that the remainder of the proposal should be redrafted in accordance with this amendment.

THE CHAIRMAN then put the Bureau's proposal as amended by Italy and Germany to the vote.

(*Adopted*).

CAPTAIN CLAUSSEN (Germany) (translation) was of the same opinion.

THE CHAIRMAN suggested that the Committee should report to the Plenary Conference that it considered this proposal to have become useless.

CAPTAIN TONTA (Dir. I. H. B.) observed that the question had in fact been solved by the publication of the book of abbreviations and symbols.

(*Proposal N° 46 was rejected*).

THE CHAIRMAN repeated his regrets at the absence of Commander Rasikotsikas during the discussion of item N° 46 of the Agenda. He regretted above all that the proposal had not been properly understood. The point under consideration was the issue of a small technical dictionary for the use of hydrographers in view of the difficulties occasioned by terms which were not sufficiently precisely defined, (for instance, the meaning of the words Straits, Channel, Passage, etc...).

The Chairman added that such a publication would meet with numerous obstacles as in the first place, hydrographers themselves were not agreed as to the exact meaning of several terms. It would therefore be preferable in case of doubt to fix the exact scope of the terminology by correspondence between colleagues rather than to instruct the Hydrographic Bureau to undertake such a work, particularly as it would always encounter certain difficulties in giving the exact definition of several words.

CAPTAIN TONTA (Dir. I. H. B.) (translation) declared that the Bureau had already taken this question into consideration and had quickly come to the conclusion that the preparation of a vocabulary giving the signification of the words would be inadequate ; it would be necessary to add the many meanings which were accepted for the words. This represented a linguistic accomplishment beyond the reach of hydrographers. The question was in any case premature.

COMMANDER SAILLANT (France) (translation) supported the view of the Chairman that this work would be out of proportion to the result in view.

(*The Chairman again invited the members of the Committee to state their opinions. Proposal N° 46 was rejected*).

## 47. Standardisation of luminous Time-Signals.

THE CHAIRMAN emphasised the necessity of adopting a system of time signals, which is as simple as possible, as was suggested by the Bureau. It would be a good thing to complete the proposal by providing that luminous time-signals should be made three times per diem, in order to help ships which left early or came in late.

COMMANDER SAILLANT (France) (translation) pointed out that the proposal of the Bureau already provided for this.

PROFESSOR TENANI (Italy) (translation) suggested that the word " exact " should be replaced by the word " indicated ". However the word " exact " could remain if it did not signify the complete hour.

He would also suggest deleting the last words of the paragraph, " which ought to coincide with a complete hour of Greenwich ".

THE CHAIRMAN considered that it would be better to keep the expression " complete hour ".

LIEUT.-COMMANDER LOPES (Portugal) (translation) recommended the adoption of the Bureau's proposal.

THE CHAIRMAN emphasised the advantage of giving signals at complete hours. He considered that the Italian proposal, if adopted, would entail a drafting modification of the paragraph.

CAPTAIN TONTA (Dir. I. H. B.) suggested adding the words " if possible " to the Italian amendment.

CAPTAIN CLAUSSEN (Germany) (translation) suggested the following amendment : to replace " ... remain alight up to the exact hour " by " the signal should terminate at the exact hour ". This modification signified that it was not necessary for the lamps to remain alight during all the time provided.

(*The Italian amendment was adopted by 6 votes*).

In consideration of this decision the Chairman thought that the drafting of this article should be altered on the basis of the principle adopted.

The Chairman announced that he would put to the vote the German amendment replacing " remain alight " by " the signal should terminate ".

THE SECRETARY GENERAL pointed out the various efforts which had been made to simplify this system of signals, especially in Germany where, after extensive experiments, a system had been adopted which was considered to be perfect.

The essential thing to mariners was to know the exact hour at which signals terminated. It would be possible to give satisfaction to Captain Claussen by stating : " ... the lamps shall be lit five minutes before the exact hour and the signal shall end at the indicated hour ".

CAPTAIN CLAUSSEN (Germany) accepted this amendment.

THE CHAIRMAN stated that Captain Claussen's amendment now read as follows : —

> " The lamps shall be lit five minutes before the hour indicated and the signal shall end at the hour indicated ".

(*The amendment was adopted*).

It was agreed that the remainder of the proposal should be redrafted in accordance with this amendment.

THE CHAIRMAN then put the Bureau's proposal as amended by Italy and Germany to the vote.

(*Adopted*).

CAPTAIN CLAUSSEN (Germany) (translation) was of the same opinion.

THE CHAIRMAN suggested that the Committee should report to the Plenary Conference that it considered this proposal to have become useless.

CAPTAIN TONTA (Dir. I. H. B.) observed that the question had in fact been solved by the publication of the book of abbreviations and symbols.

(*Proposal N° 46 was rejected*).

THE CHAIRMAN repeated his regrets at the absence of Commander Rasikotsikas during the discussion of item N° 46 of the Agenda. He regretted above all that the proposal had not been properly understood. The point under consideration was the issue of a small technical dictionary for the use of hydrographers in view of the difficulties occasioned by terms which were not sufficiently precisely defined, (for instance, the meaning of the words Straits, Channel, Passage, etc...).

The Chairman added that such a publication would meet with numerous obstacles as in the first place, hydrographers themselves were not agreed as to the exact meaning of several terms. It would therefore be preferable in case of doubt to fix the exact scope of the terminology by correspondence between colleagues rather than to instruct the Hydrographic Bureau to undertake such a work, particularly as it would always encounter certain difficulties in giving the exact definition of several words.

CAPTAIN TONTA (Dir. I. H. B.) (translation) declared that the Bureau had already taken this question into consideration and had quickly come to the conclusion that the preparation of a vocabulary giving the signification of the words would be inadequate ; it would be necessary to add the many meanings which were accepted for the words. This represented a linguistic accomplishment beyond the reach of hydrographers. The question was in any case premature.

COMMANDER SAILLANT (France) (translation) supported the view of the Chairman that this work would be out of proportion to the result in view.

(*The Chairman again invited the members of the Committee to state their opinions. Proposal N° 46 was rejected*).

## 47. Standardisation of luminous Time-Signals.

THE CHAIRMAN emphasised the necessity of adopting a system of time signals, which is as simple as possible, as was suggested by the Bureau. It would be a good thing to complete the proposal by providing that luminous time-signals should be made three times per diem, in order to help ships which left early or came in late.

COMMANDER SAILLANT (France) (translation) pointed out that the proposal of the Bureau already provided for this.

PROFESSOR TENANI (Italy) (translation) suggested that the word "exact" should be replaced by the word "indicated". However the word "exact" could remain if it did not signify the complete hour.

He would also suggest deleting the last words of the paragraph, "which ought to coincide with a complete hour of Greenwich".

THE CHAIRMAN considered that it would be better to keep the expression "complete hour".

LIEUT.-COMMANDER LOPES (Portugal) (translation) recommended the adoption of the Bureau's proposal.

THE CHAIRMAN emphasised the advantage of giving signals at complete hours. He considered that the Italian proposal, if adopted, would entail a drafting modification of the paragraph.

CAPTAIN TONTA (Dir. I. H. B.) suggested adding the words "if possible" to the Italian amendment.

CAPTAIN CLAUSSEN (Germany) (translation) suggested the following amendment : to replace "... remain alight up to the exact hour" by "the signal should terminate at the exact hour". This modification signified that it was not necessary for the lamps to remain alight during all the time provided.

(*The Italian amendment was adopted by 6 votes*).

In consideration of this decision the Chairman thought that the drafting of this article should be altered on the basis of the principle adopted.

The Chairman announced that he would put to the vote the German amendment replacing "remain alight" by "the signal should terminate".

THE SECRETARY GENERAL pointed out the various efforts which had been made to simplify this system of signals, especially in Germany where, after extensive experiments, a system had been adopted which was considered to be perfect.

The essential thing to mariners was to know the exact hour at which signals terminated. It would be possible to give satisfaction to Captain Claussen by stating : "... the lamps shall be lit five minutes before the exact hour and the signal shall end at the indicated hour".

CAPTAIN CLAUSSEN (Germany) accepted this amendment.

THE CHAIRMAN stated that Captain Claussen's amendment now read as follows : —

> "The lamps shall be lit five minutes before the hour indicated and the signal shall end at the hour indicated".

(*The amendment was adopted*).

It was agreed that the remainder of the proposal should be redrafted in accordance with this amendment.

THE CHAIRMAN then put the Bureau's proposal as amended by Italy and Germany to the vote.

(*Adopted*).

## 48a. Study of Oceanic Currents.

THE CHAIRMAN noted that this proposal had already been submitted to the *Consejo Oceanografico Ibero-Americano* and that there was therefore no object in discussing it further. He accordingly suggested that the question be dropped.

(*This was unanimously adopted*).

THE CHAIRMAN requested the Committee to authorise him to submit the Report in accordance with the Minutes.

(*Agreed*).

(The Meeting rose at 5.45 p.m.).

# REPORT OF THE COMMITTEE ON DOCUMENTS.

The Committee on Documents examined the following questions on the agenda entrusted to them by the Conference.

N$^{os}$ 29 — 31 — 31$^{a}$ — 33$^{a}$ — 36$^{b}$ — 40 — 41 — 42 — 43 — 46 — 47 and 48$^{a}$.

The Committee reports as follows :

## *N° 29. - NOTATION FOR DISTINGUISHING THE CHARACTERISTICS OF LIGHTS.*

The Committee adopted paragraph *a*) of the Greek proposals :

*a*) that the diagram representing the whole of the successive phases which the light presents during its period be entitled " Physiognomy of the Characteristics ".

The Committee adopted paragraph *b*) and *c*) amended as follows :

*b*) that the International Hydrographic Bureau be requested to compile a table of all the existing " phvsiognomies " and that each type be denoted by a number.

*c*) that the abbreviations of the characteristics indicated in the Lights Lists be supplemented by the number in the above table corresponding to the " physiognomy ".

The Committee was of the opinion that such distinguishing characteristics might advantageously be added to the abbreviations in Light Lists if a table as described in paragraph *a*) were available for use on the bridge.

## *N° 31 - 31$^{a}$. - INTERNATIONAL CODE BOOK OF SIGNALS.*

The proposal that the International Hydrographic Bureau should publish separately from time to time lists of Signal Stations and that the various Hydrographic Offices of the States Members should cooperate in keeping these lists up to date by publishing Notices to Mariners periodically or annually, or at least by periodically advising the Bureau of the necessary changes, was not adopted by the Committee on Documents.

The principal reasons why it was rejected are stated in the minutes of the proceedings of the Committee on Documents.

For the rest, recognising the considerable work incorporated in the Special Publication, " the Life Saving Stations of the World " and the fact that certain Hydrographic Offices do not consider it necessary to incorporate these details in their Sailing Directions, as well as the fact that this public-

ation has already been published, the Committee does not wish the publication in question abandoned but hopes, on the contrary, that it will be kept up to date.

*N° 33a. - NOTICES TO MARINERS. SUMMER TIME.*

The Committee adopted the proposal made by the Bureau : —

"that the Hydrographic Office of every nation should publish annually, as early as possible, a Notice to Mariners giving the dates of the commencement of summer time for its own country, its colonies, protectorates and dependencies and for such other countries of which it has been informed of such dates.

"As far as possible Notices of this type should be grouped together and appear at the beginning of one of the periodical issues of Notices to Mariners".

*N° 36b. - MENTION OF ORIGINAL CHARTS IN NOTICES TO MARINERS.*

The Committee was of opinion that it appeared rather too early as yet to raise this question.

In consequence it is suggested to postpone this question until the next Conference.

*N° 40. - OVERLAPPING OF HYDROGRAPHIC PUBLICATIONS.*

The Committee adopted the proposal made by the Bureau that :

"where it is necessary to overlap or duplicate matter in hydrographic publications the evidence of such overlapping with another publication of the same kind shall be so clearly indicated that no overlap can escape notice when making corrections".

*N° 41 - NON-OFFICIAL PUBLICATIONS.*

The Committee adopted paragraph *a*) of the Bureau's proposal :.

*a*) that Hydrographic Offices should warn seamen against non-official publications for navigational purposes and endeavour to bring about the use of official publications, as these only are corrected up to the date of their sale and while they are in use by means of lists of corrections.

On the other hand it is thought that the Hydrographic Offices should turn their attention to the possibility of publishing more practical charts than those at present issued for the use of ships, since the use of "Blue-backs" indicated that they possibly possess some advantage over official publications.

The vote on paragraph *b*) of the Bureau's proposal was even.

Paragraph *c*) was rejected

In the present state of affairs the Committee thought advisable to confine itself to paragraph *a*) of the Bureau's proposal.

It is remarked that several countries were not in a position to take measures against the use of unofficial charts, but were reduced to making every effort in this direction by means of recommendations to the Shipping Companies. No sanctions, however, were possible.

### *N° 42. - DISSEMINATION OF NAUTICAL INFORMATION.*

The Committee adopted the proposal made by the Bureau that :

> " each Hydrographic Office should seek to obtain prompt information as to changes in aids to navigation not only from those branches of the Government which are charged with their maintenance, but also from pilots, sea captains and others who should be encouraged in every way to report immediately any divergencies which they have observed between aids to navigation and the indication given on charts or description given in other official publications ".

The aim in view being the maximum amount of propaganda in order to induce the Merchant Marine, ships' captains, pilots and navigators in general to collect and forward all the data likely to interest the Hydrographic Offices.

### *N° 43. - UNIFICATION OF THE INTERNATIONAL NOTATIONS FOR LATITUDES, LONGITUDES, Etc...*

The proposal to request the International Geodetic and Geophysic Union to include this matter on the agenda of its General Assembly at Stockholm in 1930 was rejected by the Committee as being outside the province of hydrographic work, and of no practical use to Hydrographic Offices or to mariners.

### *N° 46. - GEOGRAPHICAL TERMS USED ON CHARTS AND IN SAILING DIRECTIONS.*

The proposal that the International Hydrographic Bureau should undertake the collection of geographic terms, in general use on charts and in Sailing Directions, and select from among these terms, those which appear most appropriate and draw up an alphabetical list with the translation in French and English was rejected by the Committee, the work entailed by this publication, if it comprised all terms and definitions, would be out of proportion to the object in view.

On the other hand it is observed that the question had in fact been partially solved by the publication of the Manual of abbreviations and symbols (Special Publication N° 22).

## *N° 47. - STANDARDISATION OF LUMINOUS TIME-SIGNALS.*

The Committee adopted the following proposal :

That an international type of luminous time signal be adopted and should conform to the following system :

The signal should be very simple.

Five minutes before the hour indicated the lamps shall be lit and the signal shall end at the hour indicated. The instant of extinction constitutes the time signal itself.

In consequence the warning signal, made by lighting of the lamps, is given 5 minutes before the time indicated. The signal should be made at least three times per diem.

## *N° 48a. - STUDY OF OCEANIC CURRENTS.*

With special reference to the study of the Humboldt Current the Committee is of opinion that there is no object in discussing it farther as this question had already been submitted to the Consejo Oceanografico Ibero-Americano.

# B. COMMITTEE ON DOCUMENTS.

*LIST OF MEMBERS OF THE COMMITTEE :*

*Chairman :* Captain J.C.F. HOOYKAAS (*Netherlands*).

*Vice-Chairman :* Captain CLAUSSEN (*Germany*).

| | |
|---|---|
| DAY, Lieutenant-Commander ..... | *Great-Britain.* |
| HERRERA, Commander ..... | *Chile.* |
| LOPES, Lieutenant-Commander ..... | *Portugal.* |
| RASIKOTSIKAS, Commander ..... | *Greece.* |
| RAVN, Commodore ..... | *Denmark.* |
| SAILLANT, Commander ..... | *France.* |
| TENANI, Professor ..... | *Italy.* |

*Secretary :* Commander W.P. BEEHLER (*I. H. B.*).

# 1st MEETING OF THE COMMITTEE ON THE WORK OF THE BUREAU.

(17th April, 1929).

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The meeting opened at 2.45 p.m., under the Chairmanship of Captain Luymes (Netherlands).

Commander Parker was invited to take part in the discussion.

The Secretary General informed the Committee that Captain Caballero y Lastres was unable to attend the meeting and had requested him to express his regrets. There was only one point — the question on currents (see N° 32) — on which he reserved his opinion. He would make a statement on this point at to-morrow's meeting.

The Chairman proposed to study the paragraphs of the Report on the Work done by the Bureau one by one. Some of them which met with the approval of the Committee would not need to be further examined.

## 1. Conventional Signs and Abbreviations.

The Chairman pointed out that this question had already been discussed by the Plenary Session and therefore, need not be further examined. He wished, however, to state that the Committee fully approved of the publications issued by the Bureau. It was deemed useful and gave no occasion for special remarks.

## 2. Depth Contours and Lines indicating Various Limits.

The Committee considered that valuable work had been done by the Bureau in this direction.

## 3. Original Charts.
## 4. Progress of Hydrography throughout the World.

The catalogue just published seemed to be satisfactory. The system for indicating briefly the nature of the surveys used for the preparations of charts, as suggested by the Bureau and amended by the Conference, would constitute an excellent method for the valuation of charts and further the study of Hydrography.

## 5. List of Doubtful Shoals and Dangers.

THE CHAIRMAN was doubtful as to the value of the list of doubtful dangers since the National Hydrographic Offices which would generally have to examine these dangers in their own waters would procure the best information, and when dangers in no man's sea were under consideration, the necessary information would be obtained direct from the National Hydrographic Offices. However, the task of compiling this publication had been entrusted to the Bureau by the Second Conference. The information published in the Hydrographic Review concerning dangers in Indo-China and in the waters off Newfoundland was most interesting and of importance for hydrographic research.

THE SECRETARY reminded the Committee that three supplements to the list of Doubtful Dangers had been issued by the I.H.B. which had also drawn up a number of "historical notes" with reference to these dangers.

THE CHAIRMAN proposed that the Committee should advise the Conference that the publication of this List of Doubtful Shoals and Dangers should be kept up to date and considered that the study of historical events concerning researches made for shoals were most interesting and valuable to hydrographers and should be continued in the same style.

*(This proposal was adopted).*

## 6. List of Maritime Geographical Positions.

THE SECRETARY showed the publication which had already been issued, he informed the Committee that further information had been received from other countries and that it was intended to publish them in the same way.

THE CHAIRMAN remarked that the list of Maritime Geographical Positions, the compilation of which was also entrusted to the Bureau by the Second Conference, although possibly of indirect benefit, as information given seems to indicate, is deemed of little importance for hydrography.

The possibility of adjusting chronometer rates by wireless and the diminution of the non-systematically surveyed areas of the world, for which a work of compilation of geographical positions is of value, lead to this conclusion.

In answer to a question from the Chairman as to the utility of that publication, Captain Romagna-Manoia (Italy) said that it was useful as a reference work for Hydrographic Offices.

COMMANDER PARKER (U.S.A.) considered that since the information has been called for from the various countries, it should be published.

REAR-ADMIRAL YONEMURA (Japan) agreed with Commander Parker.

The Committee decided to take note of the publication issued by the International Hydrographic Bureau and to note the intention of the Bureau to continue the publication.

## 6a. Original Sailing Directions.
## 7. Study of the Sailing Directions published by the Various Countries.

It was decided that the study of Sailing Directions on the lines given should be encouraged.

## 8. Distance Tables.

Captain Tonta (Director I.H.B.) informed the Committee that the work had just begun and that it would be limited to the choice of common departure points and to the publication of the bibliography of existing tables of distances.

The Committee considered that the collation of all information concerning existing distance tables and choice of common departure points is of interest and should be encouraged.

## 9. Centralisation in Foreign Ports of Notices to Mariners.

This question had already been dealt with in a Plenary Session.

Captain Romagna-Manoia (Italy) repeated his reserves concerning the method of centralisation.

The vote of the Conference in this matter has already shown that the action of the Bureau in this connection is appreciated.

## 10. Tabulation of urgent Notices to Mariners in the International Code.

The Secretary referred to the study which was published in the Hydrographic Bulletin of March 1929. This article contained suggestions in case it were desired to publish Notices to Mariners in an international form. Until now translations into English and occasionally into Spanish have been given " en clair " by wireless and repeated several times after the message. The proposal is that a translation into an international form should replace one of these repetitions. The Hydrographic Bulletin will make known new suggestions, further study will be made when information has been received.

The Committee decided to express appreciation of the work done by the Bureau in this direction.

## 11. Publication of Harmonic Constants.

THE SECRETARY gave information as to the way in which the Bureau intends to publish Harmonic Constants. This publication would be made in separate slips for each of the principal ports and would include about 500 slips.

THE CHAIRMAN suggested that such work be limited to what may be of use to Hydrographic Offices.

PROFESSOR TENANI (Italy) pointed out that this would not mean a great saving of money.

COMMANDER PARKER (U. S. A.) remarked that this publication was useful to offices preparing tidal predictions for the whole world. For that work all available constants are needed.

REAR-ADMIRAL YONEMURA (Japan) agreed with the observation made by Commander Parker.

CAPTAIN TONTA (Director I.H.B.) pointed out that the Bureau intends to keep the publication which it has issued up to date. (Supplt. Publication N° 12).

The Committee expressed itself in favour of the continuation of the work begun by the International Hydrographic Bureau.

## 12. Study of the Tide-Tables published by the Various Countries.

It was decided to note with appreciation the publication announced by the International Hydrographic Bureau.

## 13. Echo-Sounding.

The Committee considered that the articles published in the Review were very interesting and of great value. The Committee hoped that the I. H. B. would continue to give descriptions of all new sounding appliances.

## 14. Sound-Ranging. - Phonotelemetry.

The Committee decided that the articles in the Review were very interesting and of great value. The Committee hoped that the International Hydrographic Bureau would continue to give descriptions of all new instruments for sound-ranging and phonotelemetry.

## 15. Velocity of Sound in Sea Water and Method of Insertion of Echo-Soundings on Charts.

## 16. Centralisation of Echo-Soundings.

## 17. Keeping up-to-date of the General Bathymetric Chart of the Oceans.

The Secretary explained the work done by the Bureau under these heads.

It was decided that the Committee need take no action as the matter had been fully dealt with by the Charts Committee.

## 18. Other Methods of Sounding.

The Committee was of opinion that the publication of complete information on all methods of sounding, especially dredging and sweeping, was highly advisable and that the articles already published were of great interest.

## 19. Use of Aircraft for Surveying.

The Committee expressed appreciation of the articles already published on this subject, and considered that it would be of interest if all experiments carried out by States Members were communicated to the Bureau.

## 20. Hydrographic Instruments.

The Committee considered that all information published on Hydrographic Instruments in the Hydrographic Review was of interest and urged that the Bureau should continue such publication.

The Committee also expressed appreciation of the exhibition which had been organised and hoped that this practice would be continued.

## 21. Methods of Engraving and Printing Marine Charts.

The Committee considered that all information published on methods of engraving and printing marine charts in the Hydrographic Review was of interest and urged the International Hydrographic Bureau to continue to publish such information.

## 22. Work carried out and projected by the Offices.

In answer to a question from the CHAIRMAN, COMMANDER SPICER-SIMSON said that the nations mentioned in paragraph 22 and the United States sent this information regularly.

He added that the information from Great Britain was published in the Report issued annually by the Hydrographic Department which was sent to all Hydrographic Offices.

THE SECRETARY pointed out that this information was useful mostly for countries which published charts of coasts other than their own. It was also useful for keeping up to date the catalogue of original charts published by the I. H. B.

In answer to H. E. NAPIER TOMLIN PASHA (Egypt), COMMANDER SPICER-SIMSON said that the U. S. S. R. carried out surveys in the White Sea and on the coast of Siberia. It was interesting to know about those surveys. Following a visit which Director Tonta paid to Leningrad and during which he made arrangements with the U.S.S.R., the I.H.B. now received documents from that country. The titles were translated and when articles seemed to be of interest to the I.H.B. the text also was translated.

He pointed out that this exchange of information relative to work done and projected had begun before the I.H.B. was organised.

The Committee decided to take note of the work in this connection and to express its approval.

## 23. Report on Divergencies between Various Hydrographic Documents and the Resolutions adopted by the Conferences.

The Committee considered it important that the I.H.B. should continue to collate data concerning this question.

## 24. Requests for Information between Offices.
## 25. Organisation and History of the Offices.
## 26. Surveying Vessels.
## 27. Work of an International Character.

The Committee considered that all these investigations, publications and recommendations were of value and especially the work done concerning the search for shoals in the neighbourhood of Cape Finisterre (N° 27).

## 28. Limits of Oceans and Seas.

The Committee expressed appreciation of the work done in respect to the limits of oceans and seas and hoped that a system might finally be found which would be generally taken as a sound basis for arranging Notices to Mariners and Sailing Directions under the same geographical divisions.

## 29. Visibility of Lights.

The Chairman thought that the Committee would be unanimous in expressing its appreciation of the work carried out by the Bureau under this head.

(*This was agreed*).

## 30. Danger Zones and Safety Lanes.

H.E. Napier Tomlin Pasha (Egypt) thought that the International Conference on Safety of Life at Sea should deal with this question and enquired if it had been asked to take up the matter.

The Chairman thought this might be done.

The Secretary General pointed out that two separate Conferences were mentioned. The International Shipping Conference was not composed of Government officials but of representatives from the Shipping Companies. Some States did indeed send delegates but the majority of the members acted in a private capacity. The agreements reached were not Government decisions but arrangements between the Companies.

The Chairman suggested that the Bureau might write a letter to the International Conference on Safety of Life at Sea to invite that Conference to deal with this question.

H.E. Napier Tomlin Pasha (Egypt) was of opinion that the International Hydrographic Conference would carry more weight.

The Secretary General agreed and stated that the Bureau had already written on .this question. The Conference could, however, pass a resolution that the matter should be referred to the International Conference on Safety of Life at Sea and suggested the following draft : —

> "The Committee recommends to the Conference that the Bureau be instructed to write to the International Conference on Safety of Life at Sea, which is meeting at London, inviting that Conference to study the question of Danger Zones and Safety Lanes."

(*This was adopted*).

## 31. Charges for Radiogoniometric Bearings.

THE SECRETARY GENERAL stated that the instructions of the 1926 Conference had been carried out.

THE CHAIRMAN thought that the Committee could express its satisfaction.

(*This was agreed*).

## 32. Study of Oceanic Currents.

THE SECRETARY GENERAL stated that Captain Caballero y Lastres would make his communication to the Conference to-morrow.

COMMANDER PARKER (U.S.A.) said he had received the impression from Publication N° 19 that the Bureau was overlapping with the International Geodetic and Geophysic Union, which has a Committee on Oceanography set up for the purpose of considering scientific problems pertaining to Oceanography.

THE SECRETARY GENERAL explained that this note had been published because it was known that the hydrographic vessels of some of the States Members were undertaking such research. It directly concerned some of the Members.

THE CHAIRMAN stated that he had wondered why Publication N° 19 was published after the Conference of 1926 had decided that such work is beyond the capacities of the staff of the Bureau.

THE SECRETARY GENERAL explained that this Special Publication was being printed at the time of the Conference.

THE CHAIRMAN observed that this publication had not had a good press and proposed that, generally speaking, the Committee was of opinion that the study of oceanic currents did not come within the province of the Bureau as expressed by a vote of the Conference of 1926.

H.E. NAPIER TOMLIN PASHA considered this rather ambiguous and suggested : —

> " The Committee is in agreement with the decision expressed by the Second Conference on this subject, but approves Publication N° 19 in so far as it deals with those aspects of oceanic currents which directly concern navigation. "

(*Agreed*).

## 33. Terminology of Submarine Relief.

COMMANDER PARKER (U.S.A.) stated that the Bureau had done quite commendable labour in this matter ; if not entirely successful, it had at any rate done a great deal.

The Chairman suggested that the Committee should express its appreciation of the work done by the Bureau on this subject.

(*Agreed*).

## 34. Buoyage and Coast Lighting.

The Chairman noted that the first edition of the Table of Buoyage contained several mistakes.

The Secretary General remarked that the Tables had been published in accordance with the information received from the States Members.

The Chairman stated that such could not be the case as regards his country. He could not utter too strong a warning that original and never secondhand information should always be used. He wished to apply the same criticism to N° 35. He asked if there were any objection to this mild criticism.

Captain Romagna-Manoia (Italy) said that he had no objection and he wished to remind the Chairman of the Greek Proposal concerning Lights (N° 29), should he desire to give the Bureau any indication of its wishes. This Proposal was to be found on page 42 of the Proposals.

The Chairman ruled that this Proposal did not concern the Committee.

H.E. Napier Tomlin Pasha (Egypt) agreed with the Chair.

The Chairman then passed to N° 35, List of Life Saving Stations.

H.E. Napier Tomlin Pasha (Egypt) before passing to N° 35 first desired to know whether the Committee had agreed with the criticism passed by the Chair relating to N° 34.

The Chairman stated that he proposed that his criticism of N° 34 should, if necessary, stand in his own name.

H.E. Napier Tomlin Pasha (Egypt) thought it best merely to adopt the following resolution : —

> " The Committee recommends that, in future, only original sources be consulted for this kind of publication. "

(*Agreed*).

## 35. List of Life Saving Stations.

The Secretary handed the Chairman a memorandum from Admiral Niblack.

The Chairman read Admiral Niblack's statement and suggested that it should be taken one paragraph at a time.

Captain Romagna-Manoia (Italy) pointed out that this question had already been rejected as a whole by the Committee on Documents.

H.E. NAPIER TOMLIN PASHA (Egypt) thought it should be left to the Plenary Session. It was unofficial and did not occur in the Proposals.

(*It was agreed that Admiral Niblack's memorandum could not be dealt with by this Committee*).

## 36. List of Signal Stations.

THE CHAIRMAN invited the members of the Committee to state whether in their opinion the lists mentioned in the last paragraph should be printed or not.

H.E. NAPIER TOMLIN PASHA (Egypt) asked if the Secretary General had sold any of the Synoptic Tables mentioned in the second paragraph.

THE SECRETARY GENERAL said that only a few copies had been sold, yet the Directing Committee was of opinion that these lists were of value to seamen, as many vessels, more particularly small craft, were not provided with wireless.

H.E. NAPIER TOMLIN PASHA (Egypt) enquired how these goods could be advertised.

THE SECRETARY GENERAL replied that some States included lists of the Bureau's publications in the catalogues of their own publications. In Siam, for instance, these were notified twice a year in Notices to Mariners, while the United States Coast and Geodetic Survey mentioned them in their Chart Catalogues. It would be a great advantage if other countries would follow suit, especially Great Britain.

THE CHAIRMAN enquired if it was necessary to tabulate the lists; personally he did not see the use of all these tabulations. Were they to be found in the British Sailing Directions ?

THE SECRETARY GENERAL replied that they were usually mentioned. They were certainly included in the French and Italian Sailing Directions.

THE CHAIRMAN pointed out that, as they were also included in the Netherlands Sailing Directions, it would be interesting to know what country did not give them.

THE SECRETARY GENERAL explained that the data were frequently given so briefly that not only were they impossible to understand but led to inaccuracies.

CAPTAIN TONTA (Director I.H.B.) (translation) said that he desired to make a personal statement and did not speak in his position as Director of the Bureau. He stated that this suggestion did not emanate from a Conference, nor was it mentioned in the Statutes. Personally he was not in favour of this publication.

THE CHAIRMAN said that after hearing Director Tonta he proposed that the Plenary Session should ask the Bureau whether or not it advised that these lists should be printed, in view of the Secretary General's remark that certain countries did not give adequate information. He did not see

the benefit of printing all these lists. The requisite information should be found in the Sailing Directions. If certain countries did not give sufficient details it was impossible for the Bureau to issue special lists for the purpose of correcting the omissions of one or two States only.

The Secretary General gave it as his opinion that it would be difficult to get seamen to refer to several books for their corrections.

Captain Tonta (Director I.H.B.) (translation) referring back to N° 35, said that experience had proved that these lists had been sold in great numbers and had had considerable success. As the first list had contained a number of errors, Admiral Niblack, in view of the more complete documentation at the disposal of the Bureau, had thought it advisable to issue these publications, the cost of which would not be great.

The Chairman pointed out that item 35 had already been settled and Director Tonta then declared that he was not in favour of publishing these lists.

H.E. Napier Tomlin Pasha (Egypt) said that they represented an unnecessary expense and should not be published. Commander Parker (U.S.A.) and Rear-Admiral Yonemura (Japan) agreed with this opinion.

The Chairman noted that the opinion of the Committee was against the publication of these lists.

## 37. International Convention with reference to the Use of W.T.

It was decided to take note of what had been done by the I. H. B. in this direction.

## 38 - 38a. Revision of the Signals of the International Code.

H.E. Napier Tomlin Pasha (Egypt) thought that this work was not within the province of the I. H. B. since it was being dealt with by another body specially entrusted with it.

Commander Parker (U.S.A.) thought that co-operation with other international bodies was always advisable.

(*It was decided to take note of what had been done by the Bureau*).

## 39. Symbols and Abbreviations - Aircraft.

Considering that a special Sub-Committee had been appointed to report on this question, the Committee took note of N° 39.

## 40. Legal Holidays.
## 41. Time Zones - Legal Time - Summer Time.
## 42. Time Signals by Visual Light Signals.
## 43. Uniform International Notations for Latitudes, Longitudes, etc.
## 44. Standardisation of the Sea-Mile.
## 45. Ellipsoids and Tables of Meridional Parts.

The Committee took note of the report from the Bureau concerning these items and considered that no action was necessary on the part of the Committee in this respect.

## 46. Bibliography and Hydrographic Documentation.

With regard to the first two paragraphs of Chapter 46, the Committee considered it of high importance that the publications of the Hydrographic Offices should be studied as soon as they are received.

The efforts made by the I.H.B. to encourage contributions to the Hydrographic Review and the Hydrographic Bulletin were appreciated.

(The meeting adjourned at 5.30 p.m.).

# 2nd MEETING OF THE COMMITTEE ON THE WORK OF THE BUREAU.

(18th APRIL, 1929).

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The meeting opened at 2.45 p.m., under the Chairmanship of Captain LUYMES (Netherlands).

## *APPROVAL OF MINUTES OF THE PREVIOUS SESSION.*

Referring to N° 32, Study of Oceanic Currents, CAPTAIN CABALLERO Y LASTRES (Peru) pointed out that at the 1926 Conference many Delegations expressed themselves in favour of the continuation of work undertaken by the I.H.B. concerning ocean currents, etc.

THE CHAIRMAN drew attention to the decision taken in this respect by the 1926 Conference. This decision was to be found on page 173, paragraph 8, of the Report of the Proceedings, and seemed to him to leave no room for doubt.

COMMANDER PARKER (U.S.A.) moved that the following decision be adopted : —

> " The Committee has examined Special Publication N° 19 and approved it in so far as it deals with those aspects of oceanic currents which directly concern navigation. "

(*This proposal was put to the vote and adopted by 4 votes against 2*).

(*The minutes of the preceding meeting were adopetd with minor amendments*).

## 47. Statutes.
## 48. Keeping up-to-date of the Table of Tonnages.

These questions having already been dealt with in Plenary Session the Committee had no comments to offer.

## 49. Regulations as to Internal Organisation.

The Committee considered that the regulations for the internal organisation of the Bureau were practical and that the distribution of the work among the Directors covered the scope of work of the I.H.B.

## 50. Regulations concerning the Personnel.

COMMANDER SPICER-SIMSON explained that this paragraph covered the Regulations for the Office Staff also. The pamphlet issued by the Bureau now forms the basis of contracts with all its employees.

The Committee decided to express approval but noted that amendments in wording to these regulations might be necessary as a result of the decisions taken by this Conference.

## 51. Financial Regulations.
## 52. Annual Reports.
## 53. Recovery of Contributions in arrear.
## 54. Sale price of Publications.

It was decided to take note of these four sections of the Report.

## 55. Free deliveries and Exchange of Publications.

This question having been dealt with in Plenary Session, the Committee had no comments to offer.

## 56. Report on realizable economies.

The Committee had no comments to offer.

## 57. Inquiry concerning the Seat of the Bureau.

It was decided to note with satisfaction that this problem had been solved.

## 58. Report of Proceedings of the last Conference.

It was decided to express appreciation of the work done by the I.H.B. in this respect. Though the reports were published somewhat late, they are interesting.

## 59. Publications issued by the Bureau.

THE CHAIRMAN considered that the Hydrographic Bulletin had proved to be a success. He wondered whether there would not be an advantage in making only one periodical publication by bringing into the Bulletin the subject matter of the Review.

Captain Tonta (Director I.H.B.) remarked that on the last number of the Bulletin the first page of the cover bore the words : " Supplement to the Hydrographic Review. " He informed the Committee that the I. H. B. had been considering the possibility of issuing the Review at shorter intervals but that it did not seem that the time had yet come to take this step.

The Chairman considered that the publication of the Year Book was unnecessary.

H.E. Napier Tomlin Pasha (Egypt) pointed out that it was not a very expensive publication.

Commander Parker (U.S.A.) thought that the Year Book does serve a useful purpose.

The Committee decided that, in general, the publications of the Bureau are worthy of appreciation.

## 60. Correspondence received and exchanged.

## 61. Distribution, according to their nature, of the various branches of work of the International Hydrographic Bureau among the Directors.

These required no special comments.

### *GENERAL COMMENTS ON THE REPORT.*

The Committee expressed appreciation of the work done by the International Hydrographic Bureau.

(The meeting closed at 5 p.m.).

# REPORT OF THE COMMITTEE ON THE WORK OF THE BUREAU.

In general the Committee took note with satisfaction of the work done by the Bureau, not only relative to the work with which the Bureau was entrusted, but also to the work undertaken on its own initiative.

(The special work entrusted to the Bureau by a Conference is marked by an asterisk).

*N° 1. CONVENTIONAL SIGNS AND ABBREVIATIONS* (*).

The Committee fully approved the publication issued by the Bureau. It is deemed useful.

*N° 2. DEPTH CONTOURS AND LINES INDICATING VARIOUS LIMITS.* (*).

The Committee considered that valuable work had been done by the Bureau in this direction.

*N° 3. ORIGINAL CHARTS.* (*)

*N° 4. PROGRESS OF HYDROGRAPHY THROUGHOUT THE WORLD.* (*)

The catalogue just published seemed to be satisfactory. The system for indicating briefly the nature of the surveys used for the preparation of charts, as suggested by the Bureau and amended by the Conference, would constitute an excellent method for the valuation of charts and further the study of Hydrography.

*N° 5. LIST OF DOUBTFUL SHOALS AND DANGERS.* (*)

The Committee advises the Conference that the publication of the List of Doubtful Shoals and Dangers should be kept up to date and considered that the studies of historical events concerning searches made for shoals which were published in the Review were most interesting and valuable to hydrographers and should be continued in the same style.

*N° 6. LIST OF MARITIME GEOGRAPHICAL POSITIONS.* (*)

The Committee decided to take note of the publication issued by the International Hydrographic Bureau and to note the intention of the Bureau to continue the publication.

*N° 6a. ORIGINAL SAILING DIRECTIONS.* (*)

*N° 7. STUDY OF THE SAILING DIRECTIONS PUBLISHED BY THE VARIOUS COUNTRIES.*

It was decided that the study of Sailing Directions on the lines given should be encouraged.

*N° 8. DISTANCE TABLES.* (*)

The Committee considered that the collation of all information concerning existing distance tables and choice of common departure points is of interest and should be encouraged.

*N° 9. CENTRALISATION IN FOREIGN PORTS OF NOTICES TO MARINERS.*

The vote of the Conference in this matter has already shown that the action of the Bureau in this connection is appreciated.

*N° 10. TABULATION OF URGENT NOTICES TO MARINERS IN THE INTERNATIONAL CODE.* (*)

The Committee decided to express appreciation of the work done by the Bureau in this direction.

*N° 11. PUBLICATION OF HARMONIC CONSTANTS.* (*)

The Committee expressed itself in favour of the continuation of the work begun by the International Hydrographic Bureau.

*N° 12. STUDY OF THE TIDE TABLES PUBLISHED BY THE VARIOUS COUNTRIES.*

It was decided to note with appreciation the publication announced by the International Hydrographic Bureau.

*N° 13. ECHO-SOUNDING.* (*)

The Committee considered that the articles published in the Review were very interesting and of great value. The Committee hoped that the I. H. B. would continue to give description of all new sounding appliances.

*N° 14. SOUND-RANGING. — PHONOTELEMETRY.*

The Committee decided that the articles in the Review were very interesting and of great value. The Committee hoped that the International Hydrographic Bureau would continue to give descriptions of all new instruments for sound-ranging and phonotelemetry.

*N° 15. VELOCITY OF SOUND IN SEA-WATER AND METHOD OF INSERTION OF ECHO-SOUNDINGS ON CHARTS.*

*N° 16. CENTRALISATION OF ECHO-SOUNDINGS.*

*N° 17. KEEPING UP-TO-DATE OF THE GENERAL BATHYMETRIC CHART OF THE OCEANS.*

It was decided that this Committee need take no action as the matter has been fully dealt with by the Charts Committee.

*N° 18. OTHER METHODS OF SOUNDING.* (*)

The Committee was of opinion that the publication of complete information on all methods of sounding, especially dredging and sweeping, was highly advisable and that the articles already published were of great interest.

*N° 19. USE OF AIRCRAFT FOR SURVEYING.*

The Committee expressed appreciation of the articles already published on this subject, and considered that it would be of interest if all experiments carried out by States Members were communicated to the Bureau.

*N° 20. HYDROGRAPHIC INSTRUMENTS.* (*)

The Committee considered that all information published on Hydrographic Instruments in the Hydrographic Review was of interest and urged that the Bureau should continue such publication.

The Committee also expressed appreciation of the exhibition which had been organised and hoped that this practice would be continued.

*N° 21. METHODS OF ENGRAVING AND PRINTING MARINE CHARTS.* (*)

The Committee considered that all information published on methods of engraving and printing marine charts in the Hydrographic Review was of interest and urged the International Hydrographic Bureau to continue to publish such information.

*N° 22. WORK CARRIED OUT .AND PROJECTED BY THE OFFICES.* (*)

The Committee decided to take note of the work in this connection and to express its approval.

*N° 23. REPORT ON DIVERGENCIES BETWEEN VARIOUS HYDROGRAPHIC DOCUMENTS AND THE RESOLUTIONS ADOPTED BY THE CONFERENCES.* (*)

The Committee considered it important that the I. H. B. should continue to collate data concerning this question.

*N° 24. REQUESTS FOR INFORMATION BETWEEN OFFICES.*
*N° 25. ORGANISATION AND HISTORY OF THE OFFICES.* (*)
*N° 26. SURVEYING VESSELS.*
*N° 27. WORK OF AN INTERNATIONAL CHARACTER.* (*)

The Committee considered that all these investigations, publications and recommendations were of value and especially the work done concerning the search for shoals in the neighbourhood of Cape Finisterre (N° 27).

*N° 28. LIMITS OF OCEANS AND SEAS.* (*)

The Committee expressed appreciation of the work done in respect to the limits of oceans and seas and hoped that a system might finally be found which would be generally taken as a sound basis for arranging Notices to Mariners and Sailing Directions under the same geographical divisions.

*N° 29. VISIBILITY OF LIGHTS.* (*)

The Committee expressed its appreciation of the work carried out by the Bureau under this head.

*N° 30 DANGER ZONES AND SAFETY LANES.*

The Committee recommended to the Conference that the Bureau be instructed to write to the International Conference on Safety of Life at Sea, which is meeting in London, inviting that Conference to study the question of Danger Zones and Safety Lanes.

*N° 31. CHARGES FOR RADIOGONIOMETRIC BEARINGS.* (*)

The Committee expressed its satisfaction that the instructions of the 1926 Conference had been carried out.

*N° 32. STUDY OF OCEANIC CURRENTS.*

The Committee was in agreement with the decision expressed by the Second Conference, but approved Publication N° 19 insofar as it deals with those aspects of oceanic currents which directly concern navigation.

*N° 33. TERMINOLOGY OF SUBMARINE RELIEF.*

The Committee expressed its appreciation of the work done by the Bureau on this subject.

*N° 34. BUOYAGE AND COAST LIGHTING.*
*N° 35. LIST OF LIFE SAVING STATIONS.*

The Committee recommended that, in future, only original sources be consulted for this kind of publication.

*N° 36. LIST OF SIGNAL STATIONS.*

The opinion of the Committee was against the publication of these lists.

*N° 37. INTERNATIONAL CONVENTION WITH REFERENCE TO THE USE OF W.T.*

It was decided to take note of the action of the I.H.B in this direction.

*N° 38 - 38a. REVISION OF THE SIGNALS OF THE INTERNATIONAL CODE.*

It was decided to take note of the action of the Bureau.

*N° 39. SYMBOLS AND ABBREVIATIONS — AIRCRAFT.*

Considering that a special Sub-Committee had been appointed to report on this question, the Committee took note of N° 39.

*N° 40. LEGAL HOLIDAYS.*
*N° 41. TIME ZONES — LEGAL TIME — SUMMER TIME.*
*N° 42. TIME SIGNALS BY VISUAL LIGHT SIGNALS.*
*N° 43. UNIFORM INTERNATIONAL NOTATIONS FOR LATITUDES, LONGITUDES, Etc...*
*N° 44. STANDARDISATION OF THE SEA-MILE.*
*N° 45. ELLIPSOIDS AND TABLES OF MERIDIONAL PARTS.*

The Committee took note of the report from the Bureau and considered that no action was necessary on the part of the Committee in this respect.

*N° 46. BIBLIOGRAPHY, HYDROGRAPHIC DOCUMENTATION.*

With regard to the first two paragraphs of Chapter 46, the Committee considered it of high importance that the publications of the various National Hydrographic Offices should be studied as soon as they are received.

The efforts made by the I.H.B. to encourage contributions to the Hydrographic Review and the Hydrographic Bulletin were appreciated.

*N° 47. STATUTES.*
*N° 48. KEEPING UP-TO-DATE OF THE TABLE OF TONNAGES.* (*)

These questions having already been dealt with in Plenary Session, the Committee had no comments to offer.

*N° 49. REGULATIONS AS TO INTERNAL ORGANISATION.* (*)

The Committee considered that the regulations for the internal organisation of the Bureau were practical and that the distribution of the work among the Directors covered the scope of work of the I.H.B.

*N° 50. REGULATIONS CONCERNING THE PERSONNEL.* (*)

The Committee decided to express approval but noted that amendments in wording to these regulations might be necessary as a result of the decisions taken by this Conference.

*N° 51. FINANCIAL REGULATIONS.* (*)

*N° 52 ANNUAL REPORTS.* (*)

*N° 53. RECOVERY OF CONTRIBUTIONS IN ARREAR.*

*N° 54. SALE PRICE OF PUBLICATIONS.* (*)

It was decided to take note of these four sections of the Report.

*N° 55. FREE DELIVERIES AND EXCHANGE OF PUBLICATIONS.* (*)

This question having been dealt with in Plenary Session the Committee had no comments to offer.

*N° 56. REPORT ON REALIZABLE ECONOMIES.* (*)

The Committee had no comments to offer.

*N° 57. INQUIRY CONCERNING THE SEAT OF THE BUREAU.* (*)

It was decided to note with satisfaction that this problem had been solved.

*N° 58. REPORT OF PROCEEDINGS OF THE LAST CONFERENCE.*

It was decided to express appreciation of the work done by the I.H.B. in this respect.

*N° 59. PUBLICATIONS ISSUED BY THE BUREAU.*

The Committee approved the publication of the Hydrographic Bulletin and noted that steps are being taken by the Directing Committee to increase the periodicity of the Hydrographic Review.

As to the other publications of the Bureau, they were, on the whole, appreciated. Opinions as to the value of the Year Book were divided, but not being an expensive publication, the Committee recommended that its publication be continued.

*N° 60. CORRESPONDENCE RECEIVED AND EXCHANGED.*

*N° 61. DISTRIBUTION, ACCORDING TO THEIR NATURE, OF THE VARIOUS BRANCHES OF WORK OF THE INTERNATIONAL HYDROGRAPHIC BUREAU AMONG THE DIRECTORS.*

These sections required no special comments from the Committee.

## *GENERAL COMMENTS ON THE REPORT.*

The Committee expressed appreciation of the work done by the International Hydrographic Bureau.

# D. FINANCE COMMITTEE.

*LIST OF MEMBERS OF THE COMMITTEE :*

*Chairman :* Captain BAUM (*United States of America*).

| | |
|---|---|
| ETCHART, Commander ..... | *Argentine.* |
| HOOYKAAS, Captain ..... | *Netherlands.* |
| MIURA, Commander ..... | *Japan.* |
| SLIWERSKI, Lieutenant ..... | *Poland.* |

*Secretary :* M. ALBERT, Assistant Secretary, *I. H. B*

# 1st MEETING OF THE FINANCE COMMITTEE.

(10th APRIL, 1929).

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The meeting opened at 2.30 p.m.

CAPTAIN BAUM (U. S. A.) was elected Chairman of the Finance Committee.

MR. ALBERT (I. H. B.) (translation) asked the Committee how it desired to arrange its system of work, what were the reports it wished to inspect and what accounts it desired to examine. He pointed out that the Committee would have to lay down its own procedure for carrying out its work, as the Bureau had not prepared a special financial report for the Conference but had confined itself to submitting the financial reports which were included every year in the Annual Report of the Bureau. In view of the fact that this Conference was a Supplementary Conference, a financial report had not been considered essential.

THE CHAIRMAN asked what was the date of the report drawn up by the League of Nations' Auditor.

MR. ALBERT (I. H. B.) replied that the latest report was dated the preceding month and that he would submit to the Committee the Annual Report for 1928, which contained all the accounts for 1928.

CAPTAIN HOOYKAAS (Netherlands) said that there were two things to be done. First of all the Committee should inspect the report drawn up by the League of Nations' Auditor and consider the accounts of the Bureau. It should then go into the decision made that morning with reference to the Staff Retirement Fund. He thought that the Delegates were already acquainted with the terms of the Retirement Fund, whereas they had not yet seen the Annual Report for 1928.

THE CHAIRMAN suggested that, in view of the fact that these documents had only just been submitted to the Delegates, the inspection of the accounts should be postponed until they had had an opportunity of looking through them.

(*The Committee agreed*).

THE CHAIRMAN stated that the Committee could go into the accounts in detail on the following day.

Turning to the next question, he said that the formation of a Retirement Fund had given rise to much comment and shown that opinions varied on this subject. He would like to know if the members of the Finance Committee had any definite ideas on this matter.

LIEUTENANT SLIWERSKI (Poland) (translation) thought that this question, which was entirely new, should be subjected to an exhaustive examination and could not be decided hurriedly.

COMMANDER MIURA (Japan) was, in principle, in agreement with the Bureau's proposal and thought that the financial scope of the scheme should be set forth clearly; further, the Committee should be informed whether the League of Nations approved.

MR. ALBERT (I. H. B.) (translation) stated in reply to Commander Miura that the idea of the Retirement Fund originated with the Assistant Treasurer of the League of Nations. The Assistant Treasurer of the League, early in 1928, had pointed out to the Directing Committee the necessity of creating a Retirement Fund for the staff in order (in his own words) "to allow the Bureau to super-annuate employees whose age prevented them from rendering further effective service". This was the origin of the scheme.

As regards the financial results, he recalled that he had laid before the Plenary Session of that morning approximate figures as regards the expenditure which was contemplated for this Fund. It was estimated that it would amount to about 2% of the Bureau's annual income.

THE CHAIRMAN reminded the Committee of the decision adopted by the Plenary Session that morning to the effect that the formation of the Retirement Fund, which had been voted in principle, should not involve any increase in the contributions of the States Members. An increase in the number of States joining the Bureau would entail an increase in the work of the Bureau and consequently an increase of staff and of the sums which would have to be set aside for salaries. In view of the decision taken by the Conference that morning a definite proportion must be laid down.

CAPTAIN HOOYKAAS (Netherlands) did not think that many more States Members would join the Bureau as it included nearly all the maritime countries. Only two or three countries having a Hydrographic Office of any importance had not joined.

THE CHAIRMAN was of opinion that the Committee should be careful always to keep well within the actual sums at the disposal of the Bureau

CAPTAIN HOOYKAAS (Netherlands) agreed with the Chairman but held that the Bureau should, above all, see to the well-being of its staff. It would be preferable to issue fewer publications and ensure that the staff was properly provided for.

THE CHAIRMAN thought that at this juncture it would be well to postpone the continuation of the debate in order to allow the members of the Committee to consider the points that had been raised, study the draft scheme and consult the other Delegates.

CAPTAIN HOOYKAAS (Netherlands) did not object to the proposed adjournement, but said he had carefully examined the scheme and desired to put several questions, not in order to receive a complete and full explanation at once, but so as to become acquainted with the ideas of the other members.

THE CHAIRMAN invited Captain Hooykaas to lay his suggestions before the Committee.

CAPTAIN HOOYKAAS (Netherlands) referred the Committee, first of all, to the sixth line of the scheme which had been circulated, in which it was

stated that every member of the I. H. B. would "receive on the date of the cessation of his services the balance standing to his credit in the Fund..... *provided that such cessation is approved by the Directing Committee and is not due to summary dismissal*". He quite understood the meaning of these terms but objected to the suggestion that the Directing Committee could approve or refuse to approve the cessation of work by a member of the staff. He considered that the Fund in question should be the property of the staff and remain the property of the staff in all circumstances.

In order to make his idea more explicit he added that if an employee, after twelve years' service, wished to retire for a personal reason, even if such reason were due to disagreement with his Director, it was wrong that the Directing Committee should be in a position to object and threaten to withold the retiring grant.

Commander Etchart (Argentine) (translation) thought that in such a case the Bureau should simply refund the employee's contributions without interest.

The Chairman explained to the Committee that in Captain Hooykaas' view an employee who had contributed to the formation of the Retirement Fund should not depend on the will of the Directing Committee with regard to the advantages to which he was entitled by the very fact of the institution of the Provident Fund.

Captain Hooykaas (Netherlands) did not wish to discuss the substance of the question but would like the Committee to give the matter a more thorough examination.

Mr. Albert (I. H. B.) (translation) pointed out that the scheme before the Committee did not provide for any contributions from the staff. Payments would be made exclusively by the Bureau. Thus the employee in receipt of 300 francs a month would continue to receive the same amount after the creation of the Retirement Fund since the payment of 10% to the Fund would be made by the Bureau.

Captain Hooykaas (Netherlands) objected that nevertheless the staff was entitled to an increase of 10%.

Mr. Albert (I. H. B.) (translation) said that according to the terms of the draft this was not so. The contracts on engaging the staff did not provide for this increase of 10%. This additional 10% paid into the Fund would, according to the draft regulation, constitute an advantage for the staff.

Commander Miura (Japan) asked whether the Directing Committee was competent to settle the question itself without submitting it to the Conference, since it was really a matter of a 10% increase in pay.

The Chairman believed that the three present members of the Committee were in favour of the constitution of this Fund but no certainty existed as regards their successors in the distant future, and it was to be feared that one day they might, in the exercise of the absolute authority conferred upon them, suddenly close down the Fund. If the principle of the Fund were on the contrary inserted in the Statutes it could no longer be

ignored or cancelled except by a decision of a Plenary Conference. Finally he asked in what circumstances the Directing Committee would not approve of an employee leaving the service of the Bureau.

THE SECRETARY GENERAL quoted a case: in the early days of the Bureau an employee suddenly left his situation without giving the usual necessary notice in order that a substitute might be found so as to prevent any interruption in the working of the Bureau. In such case it was quite natural that the Directing Committee should refuse to approve of an employee leaving the service and should not grant him the ordinary advantages laid down for normal cases.

Finally, the establishment of the Retirement Fund must be examined together with the Staff Regulations which were put into force two years ago. No regular contract existed previously ; the members of the staff were invited to accept the conditions laid down in the present Regulations which henceforth constituted a contract with them. The said Regulations lay down the conditions with respect to dismissal or cessation of service.

Members of the Committee would find the Regulations concerning these two important points in the Annual Report for 1927. In practice the departure of an official is approved except where there has been a sudden breach of contract.

CAPTAIN HOOYKAAS (Netherlands) requested an explanation of the exact meaning of the term " summary dismissal ".

THE SECRETARY GENERAL replied that this expression referred to immediate dismissal on account of a serious offence or dishonesty.

MR. ALBERT (I. H. B.) (translation) add that that punishment in such a case is expressly provided for by the Regulations.

CAPTAIN HOOYKAAS (Netherlands) asked what was meant by " at the discretion of the Directing Committee " at the end of the second paragraph : " *In case of death this balance shall be paid to his family or to his dependants at the discretion of the Directing Committee* ".

THE SECRETARY GENERAL explained that this clause had been inserted at the suggestion of the Assistant Treasurer of the League. The staff of the I. H. B. was international and the question of inheritance was governed by the laws of the country of origin of the employees even if they were resident abroad. It would be necessary either to give a detailed account, which would have been too long, or confine oneself to a vague formula leaving wide powers to the Directing Committee. " At the discretion of the Committee " meant that in each special case the Committee would appoint the persons who, in its opinion, were really entitled, on the death of the official, to receive these sums.

THE CHAIRMAN stated that first of all he had thought the staff was to make a financial contribution. This seemed to be the case on perusing paragraph *b*) : " This Fund will be constituted by setting aside a sum equal to 10% of each employee's salary per annum during the first ten years of his service ". This, however, had not been the intention since the I. H. B. would assume entire responsibility for creating and financing the Fund He

invited his colleagues to submit their comments or objections and to put any questions they might consider necessary in order to make the question thoroughly clear.

Captain Hooykaas (Netherlands) did not approve of a passage in the third paragraph on the first page of the draft scheme : " The Bureau will contribute all of this 10% to the Fund, *which belongs to the Bureau* and shall be administered by the Secretary General... ". The Retirement Fund should not belong to the Bureau ; it was the property of the staff but might be administered by the Secretary General. For this reason he proposed the deletion of the words : " which belongs to the Bureau.... ".

The Chairman pointed out that if these sums were placed on deposit anywhere they must be the property of some person and be administered by a person clearly indicated.

Lieutenant Sliwerski (Poland) (translation) objected that Captain Hooykaas' proposal would leave the ownership of these sums undefined.

Commander Etchart (Argentine) (translation) admitted that the Fund belonged to the staff under the administration of the Secretary General.

Captain Hooykaas (Netherlands) knew of several firms having a staff provident fund which was the property of the staff.

The Secretary General explained that the plan was drawn up on the initiative of the Financial Section of the League.

The League had founded a similar Provident Fund composed of contributions by the insured staff, deducted out of pay, and contributions by the League itself. After some discussion the Financial Services of the League came to the conclusion that in the case of so restricted an organisation as the I.H.B. Retirement Fund, it was not advisable to provide for a contribution from the staff which would be deducted from the salaries.

The I. H. B. staff was very small compared with that of the League which amounted to about 800 members. On these grounds the scheme under discussion provided for contributions from the Bureau only.

The Chairman observed that with a view to the discussion which would take place later, only Captain Hooykaas' suggestion need be taken into consideration.

The Secretary General added that the whole of this question revolved around the problem of investing the money. If it were agreed that the Fund belonged to the staff the latter would have to decide as to its investment and in so small a staff as that of the Bureau it would be difficult to find a person who could represent the staff and at the same time administer the Fund.

Captain Hooykaas (Netherlands) observed that there were no grounds for this objection since if the Committee accepted the proposal he intended to submit, the money, even if it became the property of the staff, would be administered by the Secretary General. His proposal was as follows : —

" The total amount of these payments shall be contributed by the Bureau to the Fund, which shall be administered by the Secretary General in accordance with such instructions as he may receive from the Directing Committee. "

The words " which shall be the property of the Bureau " were thus deleted. The Committee would have time to consider this suggestion.

COMMANDER ETCHART (Argentine) (translation) pointed out that in several countries where a Provident Fund for the administrative staff was formed and to which both the State and the employees contributed, the law laid down that such provident funds belonged entirely to the staff.

THE SECRETARY GENERAL feared also that if these Regulations gave the property in this Fund to the staff, the Bureau would no longer have recourse against those members of the staff who left their situations after improper breach of contract without giving sufficient previous notice or on account of serious misbehaviour The courts would decide in favour of the staff.

CAPTAIN HOOYKAAS (Netherlands) replied that he would prefer not to lay down in set terms to whom the Fund should belong ; it would be sufficient to state that the administration of the Fund had been entrusted to the Secretary General.

THE SECRETARY GENERAL objected that the courts might then decide, in case of a dispute, that the Fund belonged to the staff if the Regulations did not clearly define that it belonged to the Bureau.

COMMANDER ETCHART (Argentine) (translation) saw no objection to laying down definitely the ownership of the Fund, whether the staff or the Bureau, if it were added that the Secretary General was responsible for the administration. Moreover, it might be stated that the property of the money was vested in the Retirement Fund itself.

COMMANDER MIURA (Japan) was of opinion that the time limit of ten years laid down in paragraph 3, of section *c*) was too long and suggested that it should be reduced to five years.

CAPTAIN HOOYKAAS (Netherlands) proposed the following addition to line 2, of section *c*) : " no payment out of this Fund shall be made to any employee who leaves after less than two years service *after the establishment of the Retirement Fund* ".

THE SECRETARY GENERAL pointed out that this addition would affect the provisions under section *g*). There existed at present a 5% fund for the payment of grants on the discharge of the staff. This fund was constituted at the time the Staff Regulations came into force. Paragraph *g*) provided for an increase of this fund by the addition of the sums necessary to bring it up to the total it would have attained if the Bureau had deposited 10% of the annual salary paid to every employee still serving since he joined the Bureau.

CAPTAIN HOOYKAAS (Netherlands) noted that this explanation altered the question. He was, nevertheless, of opinion that it would be necessary to state precisely at what date the two years service mentioned in paragraph 1, of section *c*) began.

The Secretary General saw no difficulty in replying to that point; namely, the date on which the employee joined the service of the Bureau.

Mr. Albert (I. H. B.) (translation) added that the question was decided by the Staff Regulations which stated that an employee's service began on that date.

Captain Hooykaas (Netherlands) requested that if the draft scheme were approved by the Conference an employee, who might subsequent to this decision desire to leave the service, should receive what was due to him, as if the 10% of his salary had been paid as from the date he joined the I.H.B.

The Secretary General explained further that the basis of the scheme had been to arrange for the equitable application as regards all entitulees, those who had been in the service of the Bureau for some time, new employees and future employees. A retrospective effect was in any case essential in order that the rights of the senior officials should not be prejudiced.

The Chairman held that the Bureau already pays 5% of the salary into a special fund in accordance with the provisions of the Staff Regulations.

Captain Hooykaas (Netherlands) reverting to section *g*) remarked that the Bureau would have to pay 10% on the salaries already paid without having arranged for funds to be made available for this purpose.

The Secretary General pointed out that section *g*) provided that : " on the establishment of this fund ", the necessary amount would be set aside for this purpose.

Mr. Albert (I. H. B.) (translation) added that the present reserve was equivalent to 5% ; a sum equal to about 4% of the annual income of the Bureau would be necessary to bring this total up to 10% between December 31st and January 1st.

The Chairman stated that if this were agreed to, the amounts already ear-marked would be doubled and then 10% of the salaries would be paid regularly every year.

Captain Hooykaas (Netherlands) noted that this solution would be more advantageous for the staff than he had thought at the beginning of the meeting.

Mr. Albert (I. H. B.) (translation) admitted that this would be more favourable in one sense but less favourable in another sense than Captain Hooykaas would have wished.

Mr. Albert (I. H. B.) (translation) added in reply to a question by Commander Miura that the payment of 5% into a special fund had been made for the last year and three months.

Captain Hooykaas (Netherlands) after reading section *d*) asked how the Bureau's reserve was invested.

The Secretary General explained that this reserve was not invested in securities but had been placed on fairly long deposit bringing in 4.75% this year and 5.50% next year.

CAPTAIN HOOYKAAS (Netherlands) stated that he was not a financial expert but thought, nevertheless, that a Provident Fund should be invested.

THE SECRETARY GENERAL stated that he could not pretend to be a financial expert either and without desiring to imply that the Bureau contained such experts feared that the investment of such funds some times gave rise to anxiety.

MR. ALBERT (I. H. B.) (translation) added that compared with the French Government which issued stock at 4.5%, the Bureau which on the same date could provide interest at the rate of 5.5% on its funds for the following year could not be said to have done a bad financial operation.

CAPTAIN HOOYKAAS (Netherlands) admitted this explanation if the funds were deposited in a perfectly safe bank.

MR. ALBERT (I. H. B.) (translation) added that the money had been deposited in one of the best Swiss banks, the "Union de Banques Suisses", which was absolutely safe.

THE SECRETARY GENERAL said in reply to Commander Miura that the Supplementary Conference would not have to give any decision as regards the Annual Report of the Bureau, this examination pertained, according to the Statutes, to the Ordinary Conference. Nevertheless, the Financial Reports were available for the Delegates who might care to examine them now.

COMMANDER MIURA (Japan) thought it would not be necessary to undertake a minute examination of the present situation since the Ordinary Conference would go into that later.

THE SECRETARY GENERAL agreed. The Ordinary Conference would inspect the Annual Financial Reports from 1926 to 1931. Nevertheless, all the documents at present existing from 1926 to that day's date were at the disposal of the Committee.

(The Committee rose at 4 p.m.).

# 2nd MEETING OF THE FINANCE COMMITTEE.

(12th APRIL, 1929).

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The Meeting opened at 2.30 p.m. with Captain BAUM (U. S. A.) in the Chair.

## *AUDITING OF ACCOUNTS FOR THE FINANCIAL YEAR* 1928.

THE CHAIRMAN asked Mr. Albert (I. H. B.) to submit the original reports for 1927 and 1928 signed by the auditors and reprinted in the Annual Report, so as to enable the Committee to see the signatures and all documents submitted in support of the audit.

He suggested that, unless there was any objection, the Finance Committee should report that it had audited the accounts submitted in the Annual Report and recommended to the Conference that these accounts should be approved.

(*This proposal was adopted*).

## *PROPOSAL FOR A RETIREMENT FUND.*

MR. ALBERT (I. H. B.) circulated a note which he had prepared, in which he showed the financial repercussion for the I.H.B. of the adoption of a Retirement Fund ; that question had been raised not only in the Committee but also at a Plenary Session of the Conference.

THE CHAIRMAN declared that the idea of a Retirement Fund, which was the only item left on the Agenda of the Finance Committee, had already been approved in principle by the Conference. The Finance Committee should now discuss the draft which had been submitted.

COMMANDER ETCHART (Argentine) (translation) was not opposed to the idea of creating a Retirement Fund, but he could not find either in the reasons given by the I.H.B. or in the actual draft submitted any definite statement as to the time when a member of the staff could or should leave the service of the I.H.B. It would be advisable to make this clear by inserting a special clause in the regulations.

MR. ALBERT (I. H. B.) replied that it was for this very reason that the Directing Committee drafted the text now under consideration.

COMMANDER ETCHART (Argentine) (translation) emphasised the necessity of specifying in the regulations for the Retirement Fund what the precise date was at which an employee left the service and also at what age he could enter the service. This would facilitate the working of the Fund.

THE CHAIRMAN could foresee difficulties if any such limit were fixed. One young man of twenty-five might already be unable to render any further service, while one old man of over sixty might still be very useful.

COMMANDER ETCHART (Argentine) (translation) thought that such special cases would be quite exceptional and that generally speaking the amount of service a man could render would be in inverse ratio to his age.

CAPTAIN HOOYKAAS (Netherlands) thought that the question should be settled in the Regulations for the Personnel rather than in those relating to the Retirement Fund.

COMMANDER ETCHART (Argentine) (translation) thought that the two sets of regulations were closely connected, as both created rights and obligations for which time limits should be clearly fixed.

COMMANDER MIURA (Japan) after considering the draft, understood that the decrease in the percentage of the contribution after the first ten years implied as a consequence that an employee who had served for ten years would be free to leave the Bureau. The payment to be made to employees who left after more than ten years' service would be proportionally smaller.

COMMANDER ETCHART (Argentine) (translation) pressed for the fixing of a date from which the employee would be entitled to have the benefit of this Fund, and he insisted that in any case they should decide what body would have authority to take a decision in the matter; that body might be the Directing Committee.

CAPTAIN HOOYKAAS (Netherlands) agreed that this might be left to the Directing Committee, but these powers should be conferred on them in the regulations concerning the personnel.

THE CHAIRMAN put the following question to the Committee. Should a retiring age be fixed ?

(*There were 3 votes against and 2 votes for*).

(*The proposal was therefore rejected*).

THE CHAIRMAN informed the Committee that he had discussed with Captain Hooykaas the question of whether the Retirement Fund should be the property of the staff, since it really amounts to an increase in salaries, or whether it should remain the property of the I. H. B.

In the opinion of the Chairman the staff had at present no rights in this matter. The Fund would result solely from payments made by the Bureau and no deduction would be made from the salaries. The Fund would be a material advantage granted to members of the staff on account of long service in order to enable those members to enjoy a pension. The Fund should therefore remain the property of the I. H. B. until the time came for the payment to be made to any individual employee leaving the service.

The same procedure was followed in national services. When services rendered had been considered satisfactory, employees were granted a pension after a certain number of years, either because they had reached a certain age or because for physical or other reasons they were no longer able to serve. In those national services resignation before the retiring age implied the loss of all claims to pension. The same applied to the case of dismissals. This showed that it was in fact a privilege which could be altered by law.

COMMANDER ETCHART (Argentine) (translation) agreed that the Retirement Fund should belong to the I. H. B., but only for the definite purpose for which it had been formed

CAPTAIN HOOYKAAS (Netherlands) was opposed to the suggestion that the Directing Committee should be allowed to decide whether a pension should be given. If the services rendered by the employee had been satisfactory that employee should be entitled to the retirement grant.

The Regulations which were the basis of all contracts already provided that 5% of the salaries should be paid into the special fund for employees. An actual right for the employees seemed to arise from this clause in the Regulations.

MR. ALBERT (I. H. B.) thought that in the intention of the Directing Committee the 5% payments on salaries under the existing regulations would not be added to the Retirement Fund after that Fund had come into existence, but that they would disappear in the future.

CAPTAIN HOOYKAAS (Netherlands) was content with this explanation.

COMMANDER ETCHART (Argentine) (translation) agreed that the putting into force of the Retirement Fund would necessitate alterations in certain clauses in the present regulations for the personnel.

MR. ALBERT (I. H. B.) answered that this was also the opinion of the Directing Committee.

THE CHAIRMAN put the following question to the Committee: Did the Committee agree in principle on the scheme suggested for the Retirement Fund, or did the Committee wish to replace it with a different scheme ?

(*The Committee expressed its unanimous approval of the principle of the scheme submitted*).

(*The Committee now examined the various parts of the proposal submitted*).

"*a*) There shall be established as from..... a Retirement Fund. Each non-elected member of the Staff of the International Hydrographic Bureau, subject to the provisions of paragraph *c*) 1., shall receive, on the day of cessation of his service, the balance standing against his name in the fund, provided that such cessation is approved by the Directing Committee and is not due to summary dismissal. In case of death this balance shall be paid to his family or to his dependants at the discretion of the Directing Committee".

THE CHAIRMAN asked from what date the Directing Committee intended to put the scheme into effect.

MR ALBERT (I. H. B.) thought there would be no objection to choosing the 1st January, 1930.

CAPTAIN HOOYKAAS (Netherlands) pointed out that employees leaving the service before that date would receive the 5% which had already been paid in.

THE CHAIRMAN noted that there would in fact be a period of over six months during which elderly employees who might have to leave the service would only receive 5%.

MR. ALBERT (I. H. B.) thought the 1st July might be suggested, but the budget for 1929 had made no provision for the Retirement Fund.

CAPTAIN HOOYKAAS (Netherlands) suggested the wording:

"There shall be established, *as from the date on which this proposal is accepted,* a Retirement Fund... ".

MR ALBERT (I. H. B.) explained that owing to the Supplementary Conference the I. H. B. would have heavy expenses to meet in 1929.

CAPTAIN HOOYKAAS (Netherlands) replied that the present Reserve Fund, which, he understood, now amounted to 300,000 francs, would be sufficient to cover all payments that might have to be made.

COMMANDER ETCHART (Argentine) (translation) would prefer the date of 1st January, 1929.

COMMANDER MIURA (Japan) seconded the proposal put forward by Captain Hooykaas (the date on which the proposal would be adopted).

THE CHAIRMAN pointed out that in consequence of the retro-activity of the scheme, the Fund would work for each employee as from the date on which he entered the service of the I. H. B. That would in no way affect the amount to be paid. A decision to put the Retirement Fund into effect now would, however, serve to protect old employees who might leave the service in the near future.

He added that if the date of 1st January, 1929, were adopted and if an employee had already left between 1st January and now, it would be necessary to find that employee again to give him money. He asked whether any employee had left the I. H. B. since 1st January, 1929.

MR. ALBERT (I. H. B.) replied in the negative.

COMMANDER ETCHART (Argentine) (translation) suggested that the Retirement Fund might come into force as from 1st May, 1929, as this would follow very shortly on the decision of the Conference.

CAPTAIN HOOYKAAS (Netherlands) thought the Committee should also consider the case in which the Conference would not accept the proposal but defer it for further study and only vote on it by letter after the end of this session. If the date of the adoption of the scheme were chosen all difficulties would be avoided.

He amended his previous proposal to read : —

"There shall be established, *as from the date of its adoption by the Conference,* a Retirement Fund... ".

COMMANDER MIURA (Japan) seconded this proposal.

CAPTAIN HOOYKAAS (Netherlands) did not understand the words "each non-elected member".

Mr. Albert (I. H. B.) replied that the object had been to exclude the Secretary General, whereas the Statutes of the Bureau read : —

" The personnel shall consist of a Secretary General and a certain number of technical and administrative employees ".

Captain Hooykaas (Netherlands) took note of this explanation.

He then proposed that the last words of paragraph *a*), " at the discretion of the Directing Committee ", should be deleted.

He suggested that the following addition be made at the end of the same paragraph : —

" Unless such termination be due to summary dismissal on account of serious misbehaviour ".

The Chairman did not think the Directing Committee should be tied in that way, as they were the only people on the spot and they had to meet all practical difficulties which might arise.

Commander Etchart (Argentine) (translation) was in favour of the addition suggested by Captain Hooykaas.

The Chairman wanted to know whether in cases of dismissal the decision was made by the Directing Committee or by the Secretary General.

Mr. Albert (I. H. B.) answered that under the regulations the decision lay with the Directing Committee.

He thought the Committee did not realise the exact meaning of the words "provided that such cessation is approved by the Directing Committee". The intention had only been to prevent an employee from informing the I. H. B. in the morning that his service would terminate on the same day. There had been no other intention. The regulations for the personnel ruled that the Assistants should give a month's notice of their intention to resign and that other employees should give fifteen days' notice.

Captain Hooykaas (Netherlands) considered that when an employee broke his contract without reason he was no longer entitled to a retirement grant.

Mr. Albert (I. H. B.) thought this opinion was perfectly logical, but the law courts both in France and in Monaco would pronounce in favour of the personnel and it was necessary to take account of this mentality which was in favour of the employee

The Chairman suggested the following text :

" Provided that such cessation is in conformity with the terms of the contract ".

Captain Hooykaas (Netherlands) approved this draft.

Mr. Albert (I. H. B.) suggested the following text :

" provided that such termination is in conformity with the provisions of the staff regulations and is not due to dismissal on account of serious misbehaviour ". (*Agreed*).

The Chairman said he would like the meaning of the words " serious misbehaviour " defined. Two different expressions were to be found in the

regulations. He suggested it should mean a serious personal misbehaviour. He added that one of the expressions used in the English text of the regulations might refer to disloyalty, such as a lie, and if understood in that sense the clause would be too severe.

MR. ALBERT (I. H. B.) thought that in the French text of the regulations misbehaviour would always be personal misbehaviour.

CAPTAIN HOOYKAAS (Netherlands) was surprised that the wording should not be that used in the regulations.

MR. ALBERT (I. H. B.) recalled the two different expressions used in those regulations.

*(The first paragraph was adopted as amended).*

As regards the second paragraph COMMANDER ETCHART (Argentine) (translation) suggested that the words "his family" as referring to the persons entitled to receive the balance in favour of the employee should be made more precise. The dependants who might lay claim to this sum, such as father, mother, wife and children, should be enumerated. In matters of succession the law varied considerably between one country and another.

CAPTAIN HOOYKAAS (Netherlands) thought that, since the regulations were drafted in Monaco, one might adopt in this matter the laws of the country.

MR. ALBERT (I. H. B.) replied that in Monaco an alien's estate fell under the law of his own country. The same remark applied to France.

LIEUTENANT SLIWERSKI (Poland) (translation) thought that one might accept the Monegasque legislation, since it was very difficult to decide in advance for each case which might arise.

COMMANDER ETCHART (Argentine) (translation) added that as concerned his own estate he was compelled by law to settle it in a certain way in favour of his own family. If he wanted to bequeath it to distant relations he would infringe the law and the State would intervene.

LIEUTENANT SLIWERSKI (Poland) (translation) would like to provide for the case of an employee who died without leaving any family except brothers or other relatives.

COMMANDER ETCHART (Argentine) (translation) emphasised the need of being as precise as possible in this matter.

THE CHAIRMAN saw in the foregoing discussion a very good reason why the Retirement Fund should remain the property of the I. H. B. Since the I. H. B. was to act as trustee for considerable sums, the Directing Committee might well receive full powers to decide who should receive the retirement grant in case of the decease of an employee.

CAPTAIN HOOYKAAS (Netherlands) thought that when an employee left a family the Directing Committee should not have to intervene but the family should be entitled to receive the retirement grant.

COMMANDER ETCHART (Argentine) (translation) still thought the word "family" was too vague.

In reply to CAPTAIN HOOYKAAS, MR. ALBERT thought that the words "at the discretion of the Directing Committee" applied both to the family and to the dependants.

CAPTAIN HOOYKAAS (Netherlands) did not understand it in this sense. According to him the Directing Committee should only decide in case there was no family and in favour of dependants.

THE SECRETARY GENERAL added that in the intention of the Directing Committee the retirement grant should go first of all to the family and should go to dependants only in case there was no family left.

The word "heirs" was not used in order to avoid the possibility of law suits. If the words "at the discretion of the Directing Committee" were inserted there would be no room for discussion.

CAPTAIN HOOYKAAS (Netherlands) now thought that the words "at the discretion of the Directing Committee" should not apply to the family.

THE SECRETARY GENERAL was of the same opinion.

COMMANDER ETCHART (Argentine) (translation) thought that the family would receive nothing if the Directing Committee thought they were not worthy of the grant.

MR. ALBERT (I. H. B.) on the contrary emphasised the legal necessity of giving the balance to the family rather than to anybody else.

COMMANDER ETCHART (Argentine) (translation) repeated his first question. What was a family ? Could a man consider illegitimate children as members of his family ?

THE SECRETARY GENERAL replied that, legally, the answer was in the negative.

COMMANDER ETCHART (Argentine) (translation) drew attention to the case of illegitimate children who either had been legitimated or could prove their parentage.

CAPTAIN HOOYKAAS (Netherlands) considered that illegitimate children who had been legitimated were covered by the word family.

COMMANDER ETCHART (Argentine) (translation) would like illegitimate children who could establish their parentage to be treated in the same way as legitimate children, even thought they had not been legitimated.

THE SECRETARY GENERAL did not think that proofs ought to be called for when it came to deciding who was entitled to receive the balance in favour of the employee after his death.

The wording used in the draft had been suggested by the League of Nations.

COMMANDER ETCHART (Argentine) (translation) understood the second paragraph as meaning that, when the Directing Committee did not wish to pay that balance to the family of the employee, they could pay it to other dependants.

THE SECRETARY GENERAL added "first of all to the family; in case there should be no family to dependants at the discretion of the Directing Committee". Even this would not remove all difficulties.

CAPTAIN HOOYKAAS (Netherlands) understood Commander Etchart to mean that the balance would not be paid, for insistance, to a cousin twice removed.

COMMANDER ETCHART (Argentine) (translation) understood the words " at the discretion of the Directing Committee " to refer to the family as well as to other people.

MR. ALBERT (I. H. B.) thought the following text might be satisfactory : —

> " In case of death this balance shall be paid at the discretion of the Directing Committee either to the family of the employee or to his dependants ".

COMMANDER ETCHART (Argentine) (translation) agreed. All law suits would thereby be avoided.

THE CHAIRMAN pointed out that, the Fund remaining the property of the I. H. B., no law suits could be entered in any case.

COMMANDER ETCHART (Argentine) (translation) was not of the same opinion. The owner of a thing had not even the legal right to do what be liked with it.

MR. ALBERT (I. H. B.) reminded the Committee of the written text under which the Fund was the property of the I. H. B. and which required the I. H. B. to use it for a precise purpose.

THE SECRETARY GENERAL approved the draft submitted by M. Albert because it seemed to settle the question very clearly.

CAPTAIN HOOYKAAS (Netherlands) was of a different opinion. He did not think that the Directing Committee should decide whether the balance was to be paid to the family or not.

COMMANDER ETCHART (Argentine) (translation) imagined that if the employee left a family the Directing Committee would always pay the balance to that family.

MR. ALBERT (I. H. B.) suggested a new text:

> " In case of death such balance shall be paid to the person appointed by the employee ".

COMMANDER ETCHART (Argentine) (translation) accepted this draft.

CAPTAIN HOOYKAAS (Netherlands) considered this draft went too far.

MR. ALBERT (I. H. B.) pointed out that, under this text, the I. H. B. would no longer have to decide who should receive the balance as the beneficiary would be nominated by the employee.

CAPTAIN HOOYKAAS (Netherlands) regretted the fact.

COMMANDER ETCHART (Argentine) (translation) was in favour of allowing the employee to designate whatever person he chose.

THE SECRETARY GENERAL requested Mr. Albert, who was better informed in the French law, to give a brief summary of the French legislation in this respect.

Mr. Albert (I. H. B.) said that under French law the employee could only dispose of a very small portion of his estate, because the intention of the legislation had been to safeguard the family estate.

In the case of the I. H. B. the Retirement Fund would not be the property of the personnel but of the I. H. B. itself. This matter, therefore could not be covered by legislation, since the Retirement Grant could not be considered as part of the estate of the employee.

Captain Hooykaas (Netherlands) entertained doubts as to this last statement.

The Chairman pointed out that when this proposal had been adopted alterations would become necessary in the regulations for the personnel, since the employee would have to inform the Directing Committee of the name of the person who should receive the retirement grant in case of his death.

Commander Etchart (Argentine) (translation) suggested the following text : —

> " In case of death the balance shall be paid at the discretion of the Directing Committee to the family, if any, of the employee and in the absence of any family, to the dependants of the employee".

The Secretary General foresaw that even with this text the word " family " might lead to difficulties of interpretation.

Mr. Albert (I. H. B.) wondered when one could be sure that there was no family left, since the idea conveyed by that word was so vague.

Captain Hooykaas (Netherlands) would prefer the following simple text · —

> " The balance shall be paid to the person appointed by the employee ".

Commander Etchart (Argentine) (translation) accepted this suggestion.

Mr. Albert (I. H. B.) suggested :

> " In case of death such balance shall be paid to the person or persons appointed by the member of the staff ".

(*This text was adopted*).

" *b*) The Fund will be constituted by setting aside a sum equal to 10% of each emplcyee's salary per annum during the first ten years of his service and to 2% of his salary for the remainder of his service.

> " The Bureau will contribute all of this 10% to the Fund, which belongs to the Bureau and shall be administered by the Secretary General in accordance with instructions issued by the Directing Committee ".

The Secretary General pointed out that the last paragraph was incomplete, since it made no reference to the 2% and therefore seemed to

suggest that the 2% would not be paid by the I. H. B. It should therefore read : —

"The Bureau will contribute all of this 10% to the Fund during the first 10 years and the 2% for the remainder of the service"

"The Bureau will contribute all these payments"

CAPTAIN HOOYKAAS (Netherlands) raised the question of the interest; in his opinion the I. H. B. should pay the interest to the employee since it receives it.

THE SECRETARY GENERAL answered that the I. H. B. would not receive any interest but that the interest would go to the Death and Invalidity Fund.

THE CHAIRMAN asked for information about the working of the Fund.

THE SECRETARY GENERAL replied that after ten years' service each employee would have to his credit ten times 10%, which amounts to one year's salary. After ten years that sum would begin to bear interest. After the first ten years the interest would be credited to the employee. For the eleventh year, if the rate of 5% is accepted, the account of the employee would be credited with 5% and 2%, i. e. 7%. In the following years there would be an increase owing to the interest carried by the 2% of the eleventh year, of the twelfth year, etc., which would bear compound interest.

CAPTAIN HOOYKAAS (Netherlands) understood that the interest would be capitalised every year.

THE CHAIRMAN asked the Committee whether they wanted to discuss the first paragraph under *b*) separately, or the whole of *b*).

LIEUTENANT SLIWERSKI( Poland) (translation) would prefer to discuss the whole of *b*).

COMMANDER ETCHART (Argentine) (translation) was of the same opinion — with the amendments suggested.

(*This was decided*).

CAPTAIN HOOYKAAS (Netherlands) suggested the following text:

"The Fund will be constitued by setting aside a sum equal to 10% of each employee's salary per annum during the first 10 years of his service, to 2% of his salary for the remainder of his service *and to the interest which will accrue to his account*".

MR. ALBERT (I. H. B.) pointed out that the interest was always credited to the Fund. This was shown further down in the proposal, as the utilisation of such interest would vary according to whether the employee had or had not completed ten years' service. The interest always accrued to the account, but was only credited to the employee as from the tenth year ; during the first ten years the interest was applied to the Death and Invalidity Fund.

CAPTAIN HOOYKAAS (Netherlands) informed the Committee that he was going to suggest giving to the employee the interest of the first ten years This would be expressed by the following words in *c*) 3 : —

"... but interest on both the years before and the years after will commence to be credited to the employee's account...".

Mr. Albert (I. H. B.) offered to make a draft as soon as he knew in their entirety the proposals of Captain Hooykaas. The first thing to decide was whether the interest accrued from the beginning should benefit the employee.

Captain Hooykaas (Netherlands) replied in the affirmative but he would only receive that interest after ten years. If he left the employment of the Bureau after five years, for example, he would not receive the interest on those five years.

Before 2 years, nothing.

Before 10 years, capital without interest.

After 10 years, capital with compound interest, including also compound interest on the 2%; in short all that has been paid in for the account of the employee.

Mr. Albert (I. H. B.) was afraid that this might lead to an even more sudden drop after ten years than under the text suggested by the I.H.B. The payments after ten years did not amount to 10% but to 2%. From the first to the 10th year the Bureau would pay 10% plus interest, after ten years 2% plus interest.

Captain Hooykaas (Netherlands) admitted it.

Mr. Albert (I. H. B.) showed that after ten years the I. H. B. would make smaller payments.

Captain Hooykaas (Netherlands) did not doubt it, but on the other hand he pointed out that the employee would receive more.

The Secretary General explained that this paragraph had been drafted as it was only to show how the 10% and the 2% would be paid. The question of interest would be considered later. This paragraph dealt only with the contributions to be paid to the Fund ; it was better to say first of all what the I. H. B. had to pay.

Captain Hooykaas (Netherlands) admitted this.

Mr. Albert (I. H. B.) could foresee that the proposal of Captain Hooykaas would raise difficulties of application, especially as regards its retrospective effect. It provided for a payment to be made to old employees so as to give them the benefit of the Retirement Fund as from the beginning of their service. In that case one should decide what rate of interest would have to be applied.

Captain Hooykaas (Netherlands) answered that it was for the I.H.B. to decide. He admitted that the problem was difficult to solve. He only explained his own ideas and thought that one ought to increase as much as possible the sum to the credit of the employee who had given long and satisfactory service. The provisions of the scheme were very modest.

The Secretary General saw how the difficulty to which Mr. Albert had pointed could be solved. It would be enough to insert in paragraph *g*) that when the Fund was constituted the grant would be increased by " a sum equal to 5% compound interest since the employee joined the Bureau ".

THE CHAIRMAN thought that Captain Hooykaas' proposal to allow the interest of the first ten years to accrue in favour of the employee was in contradiction with an observation he himself wanted to make about the last part of the scheme.

He also noted that paragraph *f*) provided for the case of employees who had left the I. H. B. and who had been reengaged. If Captain Hooykaas' proposal were adopted the consequence would be that the employee might find it to his advantage to leave the I. H. B. after nine years and then apply for readmission six months later.

He suggested that in lieu of paragraph *f*), which is rather indirect, the Committee should insert : —

> " If an employee has left the Bureau and has been re-engaged later he is considered as a new employee ".

This would have to be drafted in a suitable form.

That suggestion would be discussed later and the Chairman only mentioned it now for the information of the Committee. He added that the simpler the organisation of the Fund, the better.

CAPTAIN HOOYKAAS (Netherlands) also agreed that the Committee should aim at simplicity ; his wish was merely to improve the payments that would be made into the Retirement Fund.

THE CHAIRMAN said that if all interests were credited to the employees from the beginning it would be necessary to find other resources for the Death and Invalidity Fund, for which provision was made later on in the proposal.

MR. ALBERT (I. H. B.) explained that the Death and Invalidity Fund was a special fund put at the disposal of the Directing Committee to be used in special cases, such as the death of an employee with a family dependent on him.

THE SECRETARY GENERAL gave another instance, that of an employee leaving the Bureau after satisfactory service of less that two years' duration.

CAPTAIN HOOYKAAS (Netherlands) was ready to take such special cases into account. He suggested that the 2% payment should be replaced by a 3% or a 4% payment.

THE SECRETARY GENERAL could not see how that alteration could provide resources for the Death and Invalidity Fund.

CAPTAIN HOOYKAAS' (Netherlands) point of view was that of the advantage of the personnel.

THE SECRETARY GENERAL submitted that the 10% might be made 11% so that the maximum would be reached in nine years instead of ten.

MR. ALBERT (I.H.B.) said he had not attended the discussion in the Directing Committee and he did not know the reason for the sudden drop from 10% to 2% after ten years. Would not a uniform rate be preferable ? If 10% throughout the service seemed too high, it might be brought down to 8% or even 7.5%.

THE SECRETARY GENERAL was also in favour of that scheme. The Directing Committee, however, did not want it, because a number of the employees were no longer in their youth. It takes a certain time for a man to become experienced in hydrography. The Assistants were hydrographers.

MR. ALBERT (I. H. B.) added that two typists in the I. H. B. were over fifty and that one draughtsman was over sixty.

CAPTAIN HOOYKAAS (Netherlands) would be ready to accept 10% during the first ten years and after that 3% or 4% instead of 2%.

THE SECRETARY GENERAL felt certain that the working of the Fund would be easier if a uniform rate were adopted.

MR. ALBERT (I. H. B.) said that the advantage to which Captain Hooykaas had pointed was that with the 10% rate the Fund would grow rapidly during the first ten years.

THE SECRETARY GENERAL explained that the idea of the Directing Committee was that something should be provided very soon

THE CHAIRMAN emphasised the necessity of giving the personnel some hope of a scheme coming into effect if good services were to be required Seen from this angle, the addition of 2% after ten years' service seemed to him insufficient.

THE SECRETARY GENERAL added that the 2% was only a supplement to the interest rate which the employee would receive, so that instead of 5% he would receive 7%.

In the opinion of COMMANDER ETCHART (Argentine) the Committee should see clearly the financial consequences which might result from the adoption of these new proposals before discussing any further and specially before coming to any decision.

MR. ALBERT (I. H. B.) said the calculations were ready and could be found in the note which had been circulated at the beginning of the meeting : —

The adoption of the suggested Retirement Fund would cost 22,000 francs during the first year at the rate of 10%, 8,000 francs during each of the next three years, and decreasing amounts during the following years.

If the 10% rate were continued indefinitely the expense during every year after the first three would be 8,000 francs per annum.

These estimates would not be exceeded as long as the staff was not increased. The more numerous the staff the larger this item would inevitably be.

THE SECRETARY GENERAL added that if the staff were notably increased a corresponding increase in the income of the Bureau would become necessary. If the I. H. B. were entrusted with more important work an increase in the personnel would become necessary and therefore the States Members would be asked to increase their contributions.

COMMANDER ETCHART (Argentine) (translation) remarked that the Conference had only adopted the principle of a Retirement Fund on the

understanding that it would entail no increase in the contributions of the States Members.

THE SECRETARY GENERAL explained that no increase was to be expected as long as the staff remained what it was and as long as the Bureau was not entrusted with any further work. If more work had to be done, the I. H. B. would require a larger staff to deal with it.

MR. ALBERT (I.H.B.) added that the Retirement Fund itself would lead to no increase in the contributions of States Members, but that additions to the staff might possibly become necessary.

COMMANDER ETCHART (Argentine) (translation) understood that such an increase in the expenses might also come as the result of the creation of a Retirement Fund and he reminded the Committee once more of the very definite conditions under which the decision of principle had been made by the Conference.

THE CHAIRMAN put to the vote the two suggestions which had been made : —

10% with interest for the first ten years,

10% without interest.

CAPTAIN HOOYKAAS (Netherlands) did not wish the question to be put thus, because if the 2% rate were to be increased he would not press his proposal to let interest accrue to the account of the employee, while he would maintain his proposal if the 2% rate remained as it was.

Personally he would prefer to see an increase in the 2% rate, because he understood the necessity of the Invalidity Fund.

THE CHAIRMAN asked the Committee whether they would choose, for instance, between the 5% and 2% rate after ten years.

COMMANDER ETCHART (Argentine) (translation) was in favour of 5%.

LIEUTENANT SLIWERSKI (Poland) (translation) admitted that this would not be excessive, but apprehended the budgetary consequences of such a decision.

THE SECRETARY GENERAL thought that 5% after ten years would mean an expense of 4,000 francs per annum.

COMMANDER MIURA (Japan) agreed to the figure of 5%.

THE CHAIRMAN then read the new text of *b*):

" The Fund shall be constituted by the deposit of a sum equivalent to 10% of the salary of every member of the staff during the first ten years of his period of service and 5% of his salary during the remainder of his service, *without interest during the first ten years*".

(*This draft was approved unanimously*).

The second section of *b*) was amended as follows : —

" The Bureau shall contribute to the Fund the total amount of *these payments...* " (the rest of the paragraph as in the original text).

(*Paragraph* b) *was adopted as amended*).

" *c*) 1. Employees who leave with less than 2 years' service will receive no payment from this Fund ".

(*Adopted without discussion*).

" *c*) 2. An employee who leaves the Bureau after completing 2 years' service and before he has 10 years' service will receive the sum with which he is credited in the Fund, with no interest ".

Captain Hooykaas (Netherlands) thought that the words " the sum with which he is credited in the Fund " were quite clear and that the words " with no interest " were unnecessary and should be deleted.

(*These words were deleted*).

(*Paragraph* c) 2 *was adopted as amended*).

" *c*) 3. On completion of 10 years' service the Bureau will contribute 5% of the employee's total annual salary but interest will commence to be credited to the employee's account, and an employee who leaves thereafter will receive the sum standing to the credit of his account in the fund, on the date of termination of his employment ".

In answer to a question from Commander Miura (Japan), Captain Hooykaas (Netherlands) said that the interest accrued from the beginning but would only be credited to the account of the employee after ten years.

Mr. Albert (I. H. B.) noted that at the end of each paragraph one could find the expression "credited to his account in the Fund". This drafting might be improved. It would be enough to say at the beginning of the regulations that when the employee left the Bureau he should receive what had been credited to his account in the Fund. It would suffice to say " what was credited to his account ".

(These drafting amendments were noted for the final draft, as the Committee only wished to decide on questions of principle).

(*Paragraph* c) 3 *was adopted with the above reserve*).

" *c*) 4. Should an employee be granted an increase of salary after he has completed 10 years of service, the amount standing to his credit in the fund, on which interest is drawn, will be augmented at the same time by a sum equal to the increase of salary granted and interest on this augmented sum will be credited to his account in the fund, as mentioned in 3 ".

Lieutenant Sliwerski (Poland) (translation) did not think this text was very clear.

THE SECRETARY GENERAL explained its purpose. It was that a sum equal to ten times 10%, i. e. the annual salary should always bear interest. In case the salary were increased, the sum credited to the employee would have to be increased accordingly.

THE CHAIRMAN considered the following instance. The employee receives a salary of 2,000 francs per annum during the first ten years. At the end of ten years he is therefore credited in the Retirement Fund with 2,000 francs. This employee continues his service with the same salary. After the twelfth year he obtains an increase of 500 francs.

THE SECRETARY GENERAL explained how paragraph 4 would work in this case. The sum credited to the employee would increase by 500 francs when the salary was increased.

MR. ALBERT (I. H. B.) added that the sum credited to the employee at that time would no longer be 2,000 francs but more, and 500 francs would be added to that sum.

THE CHAIRMAN took another instance. that of an employee receiving 2,000 francs per annum during six years and 2,500 from the seventh year.

THE SECRETARY GENERAL said that at the tenth year the sums to his credit would be increased to 2,500 francs in conformity with his actual salary.

(*Paragraph* c) 4 *was adopted*).

" *c*) 5. In calculating the interest due, periods of service of less than half a year will be neglected ".

(*Paragraph* c) 5 *was adopted without discussion*).

" *d*) There will be no separate investment of the fund ; it will be dealt with in the same way as the Bureau's reserve ".

MR. ALBERT (I. H. B.) explained the reason for this paragraph was to avoid the necessity of investing money and also to avoid requests from employees that money should be invested in any particular way.

Since, however, the Fund remained the property of the I. H. B., this clause seemed unnecessary.

THE SECRETARY GENERAL considered that paragraph (*d*) should only be read as an indication that no speculation should be considered.

THE CHAIRMAN reminded the Committee that the possibility of the suppression of the Bureau had been considered by another Committee. He thought that should this case arise the Retirement Fund should be invested in such a way that the staff should not have to bear any deficit and should receive the total amount of the Retirement Fund.

THE SECRETARY GENERAL admitted that the staff should have a privileged claim on this Fund.

MR ALBERT (I. H. B.) thought such a privilege could only result from legislation. It should therefore be created by the Statutes.

CAPTAIN HOOYKAAS (Netherlands) suggested the insertion of a clause to the effect that the Fund could not in any case be used to cover a financial deficit of the I. H. B.

Mr. Albert (I. H. B.) answered that such a provision could only result from law.

The Secretary General thought that the Committee might suggest to the Conference the addition to the Statutes of an article under which the Retirement Fund for the personnel could not be used to cover a financial deficit of the I. H. B.

If such a clause were inserted in the Statutes it would be effective because the Statutes had been given the force of law in the Principality of Monaco.

Captain Hooykaas submitted a slightly different text, which might be reworded : —

> " The Fund will remain separate from the other funds of the Bureau ".

The Chairman was afraid this might lead to confusion. The inclusion in the Statutes of the article suggested would constitute a contradiction between the Statutes and paragraph *d*) under which " there will be no separate investment of the fund ".

The Secretary General pointed out that there might be a separate account although the investment remained the same.

The last sentence in paragraph *d*) might be suppressed if the Statutes provided the necessary guarantee.

Mr. Albert (I. H. B.) thought the whole of paragraph (*d*) might be deleted.

The Secretary General considered that in such a case the Bureau would decide how the Fund would be invested.

Commander Etchart (Argentine) (translation) was in favour of deleting the whole of paragraph *d*).

The Secretary General admitted that if the Statutes provided the necessary guarantee paragraph *d*) became unnecessary, especially as the Fund was the property of the I. H. B.

(*Paragraph* d) *was suppressed*).

Lieutenant Sliwerski (Poland) (translation) reminded the Committee that the above suppression would necessitate an addition to the Statutes.

Mr. Albert (I. H. B.) suggested the following text:

> " The Committee decides to delete paragraph *d*) and to prepare an article for insertion in the Statutes in order to safeguard the Retirement Fund in case of dissolution of the I. H. B. ".

(*This was adopted unanimously*).

> " *e*) (becoming *d*) When an employee has completed 10 years of service, the sum with which he is credited will be brought up to the amount of his annual salary at that time and will then draw interest, as mentioned in *c*) 3".

(*Adopted without discussion*).

"*f*) (becoming *e*) The contributions for an employee who, on leaving the Bureau, has received a payment from this Fund on account of retirement and who is reengaged :—

1. Will, if his previous service is less than 10 years, be recommenced as if he had not left the Bureau but, on completion of 10 years' total service in the Bureau, that part only of the fund which has been contributed on his account since his reengagement will draw interest ".

THE CHAIRMAN suggested that paragraph (*f*) 1 should be replaced by a text meaning :—

" When an employee has left the service of the Bureau and has been reengaged, he will be treated as an entirely new employee "

This would be justified ; when an employee had left the service he would have had the benefit of the Retirement Fund. If he came back he should, like the others, take his chance of attaining ten years' service.

CAPTAIN HOOYKAAS (Netherlands) thought that under these conditions paragraph *f*) 1 might be deleted.

THE SECRETARY GENERAL said that if an employee left the I. H. B. he received his share of the Retirement Fund. If he came back the Bureau would continue payment as if the employee had not left until ten years' service had been completed; it seemed that the method suggested by the Chairman would be to the advantage of that employee.

MR. ALBERT (I. H. B.) pointed out that since the advantage of the Retirement Fund decreased as the years of service increased, an employee after fifteen years' service would receive less from the I. H. B. than one with only five years' service. The deletion of the paragraph as suggested by the Committee would have the contrary effect, since it appeared from the text submitted that the Committee did not want to favour the employee who had left the service and came back later. This question should be examined closely, because the new proposal would in practice be still more advantageous than the previous one for the employee who had left and returned.

CAPTAIN HOOYKAAS (Netherlands) thought that the employee would receive practically the same amount if account were taken of the interest. He proposed the deletion of that paragraph.

THE SECRETARY GENERAL would prefer to leave two lines to say that when an employee had left the I. H. B. and had been reengaged he would be considered as a new employee.

LIEUTENANT SLIWERSKI (Poland) (translation) and COMMANDER MIURA (Japan) approved the proposal made by the Secretary General.

CAPTAIN HOOYKAAS (Netherlands) thought the clause suggested by the Secretary General should rather be found in the regulations for the personnel than in those relating to the Retirement Fund.

THE SECRETARY GENERAL pointed out that in his opinion the regulations for the Retirement Fund would become part of the regulations for the personnel as soon as they had been adopted.

CAPTAIN HOOYKAAS (Netherlands) was of opinion that there were two different sets of regulations.

THE SECRETARY GENERAL emphasised the necessity of informing the employee of his rights and duties under both sets of regulations when he was being engaged. Those regulations would in practice constitute a whole. The question of the 5% to be paid by the Bureau was already dealt with in the regulations for the personnel. This clause would disappear as a consequence of the creation of a Retirement Fund.

LIEUTENANT ŚLIWERSKI (Poland) (translation) did not think that paragraph *f*) 1 should be omitted entirely.

COMMANDER MIURA (Japan) shared the opinion of Captain Hooykaas that the proposal of the Secretary General, under which an employee who had left the service and been reengaged would be treated as a new employee, should rather be inserted in the regulations for the personnel.

THE CHAIRMAN asked the Committee whether they intended to delete the whole paragraph and replace it by a clause as follows : —

> " A member of the staff who has left the Bureau and is reappointed shall be treated as a new member ".

(*This was decided*).

> " *g*) (becoming *f*) On the establishment of this fund the sums placed to the credit of the existing personnel, under Art. 10, paragraph *c*), clause iii of the existing Regulations for the Office Staff (January, 1928) will be increased by the amounts necessary to bring them up to such total as they would have attained had the Bureau set aside 10% of the annual salaries paid to each employee since he joined the Bureau ".

THE SECRETARY GENERAL explained that the aim of this paragraph was to put all the personnel upon an equal footing and especially to avoid refusing older employees advantages which would be granted to new ones.

(*Paragraph* g) *was adopted without discussion*).

> " *h*) (becoming *g*) The sums credited to employees who leave before completing two years of service will be entered into a special fund, entitled " Death and Invalidity Fund ", which will be employed to furnish special grants in cases of death or retirement through invalidity of employees should the Directing Committee consider that any such cases are worthy of special consideration ".

(*Paragraph* h) *was adopted without discussion*).

> " *i*) (becoming *h*) The interest drawn on the sums lying to the credit of employees who have not completed 10 years' service in the Bureau shall, unless the Directing Committee decides to the contrary, be placed to the credit of the " Death and Invalidity Fund ".

CAPTAIN HOOYKAAS (Netherlands) considered the possibility of a fund which would reach very high figures.

THE SECRETARY GENERAL answered that for this very reason the Committee might decide to use the interest for some other purpose. He added that the proposal had been put forward by the Assistant Treasurer of the League of Nations.

LIEUTENANT SLIWERSKI (Poland) (translation) would like an addition to this paragraph to specify above what sum the Committee might use the interest for a different purpose.

THE SECRETARY GENERAL thought that their decision would depend on circumstances.

LIEUTENANT SLIWERSKI (Poland) (translation) insisted that a minimum figure should be fixed.

THE CHAIRMAN thought that the question of a maximum and a minimum should be left for the Directing Committee to decide.

COMMANDER ETCHART (Argentine) (translation) also thought it would be difficult to fix any figure.

THE CHAIRMAN considered the following supposition.

Several employees of the I. H. B. find themselves in the same bus on the way of their office. The bus is smashed up at cross roads. Such a mishap would necessitate a very heavy payment out of the Retirement Fund.

MR. ALBERT (I. H. B.) replied that the French law, which also applied in Monaco, would treat this as a matter for workmen's compensation. An employee going to work is considered as in the same position as if he were at work, and should he meet with an accident on his way the employer would be responsible.

LIEUTENANT SLIWERSKI (Poland) (translation) was in favour of his own proposal that the minimum should be reached by the Invalidity Fund before the Directing Committee should be allowed to use the interest for another purpose.

THE SECRETARY GENERAL thought that this could be done. He added that the Fund would always receive those sums corresponding to the salaries of employees who serve less than two years and leave the Bureau without being entitled to any retirement grant.

The Directing Committee would be in a good position to keep itself informed of the gradual increase of the Death and Invalidity Fund and able to judge when the time had come to use interest for other purposes.

CAPTAIN HOOYKAAS saw no reason why a minimum figure should be fixed in paragraph *i*).

LIEUTENANT SLIWERSKI (Poland) (translation) replied that in this case he withdrew his motion.

(*Paragraph* i) *was accepted in the original text*).

THE CHAIRMAN asked Mr. Albert (I. H. B.) to revise the wording of the amendments adopted and submit the draft of the addition to the Statutes.

The Committee would examine the whole question during its next meeting on Monday afternoon at 2.30 p.m. The Conference would then have to decide.

THE SECRETARY GENERAL suggested that the article, the addition of which would be proposed by the Committee, should be numbered in such a way as not to entail the renumbering of the other articles.

(The Committee rose at 5.15 p.m.).

# 3rd MEETING OF THE FINANCE COMMITTEE.

(15th APRIL, 1929).

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The meeting opened at 2.30 p.m., with Captain BAUM (U.S.A.) in the Chair.

## *MINUTES OF THE PRECEDING MEETINGS.*

MR. ALBERT (I. H. B.) (translation) in reply to a question from the Chair regarding the subsequent reading of the Minutes of the two preceding meetings, stated that the Minutes had been prepared in duplicate, but that he had not himself had time to read through them. It was his intention to submit the Minutes later to the members of the Committee in order that they might add any amendments they thought fit.

(*The Committee noted this communication*).

## *APPROVAL OF THE AMENDED DRAFT SCHEME FOR THE RETIREMENT FUND:*

MR. ALBERT (I. H. B.) (translation) read the various sections of the draft scheme which were again brought up for discussion.

*a*) " A *Retirement Fund* shall be established as from the date of the adoption of this proposal by the Conference. Each member of the staff of the International Hydrographic Bureau shall, subject to the condition contained in paragraph *c*) 1, receive on the date of the cessation of his services the balance standing to his credit in the Fund, provided that such termination is in conformity with the provisions of the Staff Regulations and is not due to summary dismissal on account of serious misbehaviour.

" In the case of death such balance shall be paid to the person or persons appointed by the employee ".

(*Paragraph* a) *was adopted without discussion*).

*b*) " The fund shall be constituted by the deposit of a sum equivalent to 10% of the annual salary of every member of the staff during the first ten years of his period of service and 5% of his annual salary during the remainder of his service.

" The Bureau shall contribute the total amount of these payments to the fund which shall remain the property of the Bureau and be administered by the Secretary General in accordance with such instructions as he may receive from the Directing Committee ".

(*Adopted without discussion*).

c) 1. " No payment out of this fund shall be made to a member of the Staff who leaves after less than two years' service ".

(*Adopted without discussion*).

2. " A member of the Staff who leaves the Bureau on completion of two years' but less than ten years' service shall receive the sums standing to his credit in the fund ".

(*Adopted without discussion*).

3. " The Bureau shall contribute 5% of the total annual salary of a member of the staff who has completed 10 years' service and as from that date such account in the Fund shall be credited with interest; a member of the staff leaving the Bureau after that period shall receive the amount standing to his credit in the Fund ".

Captain Hooykaas (Netherlands) proposed that the second part of this clause should read : " ... and as from that date such account shall be credited with *compound* interest... ".

Commander Etchart (Argentine) (translation) seconded this motion.

(*Paragraph 3 was adopted with the addition of the word "compound"*)

Commander Etchart (Argentine) (translation) again asked if it would not be wise to fix the length of the time limit during which interest would be capitalised.

Mr Albert (I. H. B.) (translation) thought that the system of the bank would be followed, i. e., every year or six months.

Commander Etchart (Argentine) (translation) said he would not insist.

4. " Should a member of the Staff receive an increase in salary after ten years' completed service, the amount standing to his credit in the fund and bearing interest shall be increased by a sum equal to the increase in salary granted and this total amount shall bear interest as laid down in sub-section 3 ".

(*Adopted without discussion*).

5. " In calculating the interest due, periods of service of less than six months shall not be taken into account ".

(*Adopted without discussion*).

d) " On completion of ten years' service the sum standing to the credit of a member of the Staff shall be brought up to the rate of his annual salary on that date and shall bear interest as laid down in c) 3. "

(*Adopted without discussion*).

e) " A member of the staff who has left the Bureau and is reappointed shall be treated as a new member ".

(*Adopted without discussion*).

*f*) " On the date of the establishment of this fund the amounts credited to the existing staff in accordance with Article 10, paragraph *c*), clause iii, of the present Regulations for the office Staff (January 1928) shall be increased by such amounts as may be necessary to bring them up to the total they would have reached if the Bureau had effected a deposit of 10% of the annual salary paid to every member of the staff since he joined the Bureau ".

(*Adopted without discussion*).

*g*) " The sums credited to members of the Staff who leave the Bureau before the completion of two years' service shall be paid into a special account, called the " Death and Invalidity Fund " which shall be set aside for the purpose of special grants in cases of death or retirement through invalidity of employees, should the Directing Committee consider that any such cases are worthy of special consideration ".

(*Adopted without discussion*).

*h*) " The interest drawn on the amounts standing to the credit of members of the staff who have not completed ten years' service shall, unless the Directing Committee decides otherwise, be placed to the credit of the " Death and Invalidity Fund ".

(*Adopted without discussion*).

(*The complete draft scheme for the Retirement Fund was put to the vote with the above amendments and unanimously adopted*).

## *DRAFT REPORT TO THE PLENARY CONFERENCE.*

THE CHAIRMAN invited Mr. Albert to read the draft report he had prepared for submission to the Plenary Conference. The Report would be laid before the Committee for discussion in detail.

" The Finance Committee, composed of : —

Captain BAUM (U. S. A.), Delegate of the United States Hydrographic Office ;

Commander ETCHART, Delegate of the Argentine Republic ;

Captain HOOYKAAS, Delegate of the Netherlands ;

Commander MIURA, Delegate of Japan ;

Lieutenant SLIWERSKI, Delegate of Poland ;

met under the Chairmanship of Captain Baum, U. S. N., at 2.30 p.m. on April 10th, 12th and 15th, in the offices of the International Hydrographic Bureau.

" The Committee was instructed :

" 1. to examine and report on the financial administration of the Bureau since the last Conference ;

"2. to report to the Conference on the proposal submitted by the Bureau for a Retirement Fund for the Staff, subject to the condition laid down by the Plenary Session of April 10th that this scheme would not entail any increase in the contributions of States Members".

(*Adopted without discussion*).

1. "After examining the accounts for 1927 and 1928 submitted in the Annual Reports published by the Bureau, the Committee requested to be shown the original signed reports on the accounts of these two years prepared by the Auditor of the League of Nations. The Committee noted the satisfactory character of these reports, the indisputable authority of which appeared to render a further and necessarily hasty supervision entirely unnecessary".

(*Adopted without discussion*).

2. "The Committee discussed at length the draft scheme for the Staff Retirement Fund submitted by the Bureau".

(*Adopted without discussion*).

*a*) "The Committee fully approves the principle of the creation of a Staff Retirement Fund and is of opinion that this Fund should be formed at once".

(*Adopted without discussion*).

*b*) "After due examination of the question, it came to the conclusion that in view of the present proportion of the budget devoted to the staff, the creation of a Retirement Fund would not involve a request for an increase in the contributions of the States Members".

(*Adopted without discussion*).

*c*) "With a view to put it into immediate effect, the Committee has amended certain items in the proposal submitted by the Bureau, whilst still considering as inadequate the advantages which the staff will receive therefrom. The Committee suggests that the Conference should adopt the scheme as amended, which is annexed to the present report and instruct the Directing Committee to submit to the Conference of 1931 a draft scheme planned on a wider basis, likely to give better advantages to the staff than those which will result from the present plan".

Captain Hooykaas (Netherlands) thought it would be preferable that the 5th line should read : "The Committee proposes to the Conference that the scheme as amended should be adopted and *put into execution immediately after having been adopted by the Conference...*" or to add : "... to put into execution immediately after adoption...".

Mr. Albert (I. H. B.) (translation) pointed out that it was not the Conference but the Bureau which would put the scheme into effect.

CAPTAIN HOOYKAAS (Netherlands) said he was thinking of the proposal which followed, namely, that the Directing Committee should draw up another scheme on a "wider basis" in accordance with the terms which had just been read. As regards the future it was therefore rather a secondary matter if the Directing Committee had to begin on the basis of a provisional draft.

MR. ALBERT (I. H. B.) (translation) suggested the following: "... The Committee proposes to the Conference to adopt the *immediate execution of the scheme as amended...*" or "...the Committee proposes to the Conference *to decide that the scheme as amended should be put into immediate execution.*"

CAPTAIN HOOYKAAS (Netherlands) accepted this draft which conveyed his idea.

MR. ALBERT (I. H. B.) (translation), nevertheless, did not think there were any grounds for Captain Hooykaas' anxiety as the first line of the scheme reads: "The Retirement Fund shall be established *as from the date of the adoption of this proposal by the Conference*".

CAPTAIN HOOYKAAS (Netherlands) explained that this organisation would have to operate immediately after its formation; there was no question of postponing its effects until after the 1931 Conference.

MR. ALBERT (I. H. B.) (translation), in order to carry out the idea put forward by Captain Hooykaas returned to the draft previously suggested: "The Committee proposes to the Conference that the *scheme as amended,* which is annexed to the present report, *should be put into immediate execution*".

(*Several Delegates assented*).

CAPTAIN HOOYKAAS (Netherlands) felt a certain hesitation with regard to keeping the words: "...whilst still considering as inadequate the advantages which the staff will receive therefrom".

MR. ALBERT (I. H. B.) (translation) said that during one of the previous meetings he had received the impression that this was the opinion of the Committee and in particular of Captain Hooykaas himself. This was the reason why this opinion had been inserted in section *c*) of the draft report to the Conference.

CAPTAIN HOOYKAAS (Netherlands) wished to add the words: "if necessary" after "the 1931 Conference".

THE CHAIRMAN accepted this addition. He thought that the League of Nations was at the present time considering a pension scheme which would provide its staff with a sufficient sum enabling the employee on retirement to purchase an annuity equal to about half his annual salary. He asked if that was the case.

MR. ALBERT (I. H. B.) (translation) did not think that this was an exact reproduction of the facts. The system mentioned had been in force in the League for about five or six years but would probably be modified during the coming years as it had been found inadequate.

THE CHAIRMAN added that whatever the system might be, he thought that when the League had put its organisation for providing a grant on retirement into force, whether that system was the present system or a different one, it would be advisable for the I. H. B. to consider the possibility of adopting it for the purposes of its own Retirement Fund. It seemed quite natural to him that all international organisations should adopt a system to which the League had given definite effect. Otherwise he was quite in agreement with Captain Hooykaas.

CAPTAIN HOOYKAAS (Netherlands) thought that the Plenary Session had adopted the principle of a Retirement Fund and not that of an insurance fund. Further, he asked whether the expression : "*likely to give* better advantages to the staff..." conveyed the idea in the mind of the Committee during its previous meeting. As clearly set out in the following paragraph, only the draft might be changed, the principles must stand as adopted and approved by the Committee.

MR. ALBERT (I.H.B.) (translation) thought the following explanation might serve as a reply to Captain Hooykaas.

The League of Nations paid to a member of the staff leaving its service a certain sum ; this was neither by way of insurance, nor was it a pension. It was a definite sum determined exactly as in the Retirement Fund contemplated by the I. H. B. This sum was calculated so as to allow the employee on leaving the service to purchase an annuity. He was not obliged to do so, but was at liberty to purchase the annuity if he wished. In calculating this sum the insurance rate was taken as a basis.

THE CHAIRMAN stated that in order that the words referred to might not lead to the rejection of the draft scheme for the Retirement Fund by the Plenary Session, he would prefer to delete the final phrasing of section *c*): "... and to instruct the Directing Committee to submit to the 1931 Conference a draft scheme planned on a wider basis, likely to give better advantages to the staff than those which will result from the present plan ".

He added that the Directing Committee had the welfare of the staff sufficiently at heart to propose to the Conference any improved plan which might come to its knowledge, such for instance, as the scheme which the League of Nations might subsequently adopt.

CAPTAIN HOOYKAAS (Netherlands) only attributed a relatively restricted meaning to the words : " to submit to the 1931 Conference a draft scheme planned on a wider basis... ". It remained to be seen whether it would be possible to embody any improvements in the system, once it had been adopted, without changing either the principles or the general frame work. This clause should not be taken as implying an invitation to alter the principles themselves of the Retirement Fund.

He did not object to the proposal to delete this passage but would prefer to terminate section *c*) with the words " wider basis ", suppressing all the rest but adding the words " if necessary ". This clause would then read : "...and to instruct the Directing Committee to submit, if necessary, to the 1931 Conference a draft scheme planned on a wider basis ".

MR. ALBERT (I. H. B.) (translation) summed up the matter and thought the clause might read : " ...the Committee proposes to the Conference that the scheme as amended, which is annexed to the present report, should be put into immediate effect, and that the Directing Committee be instructed to submit, if necessary, to the 1931 Conference a draft scheme planned on a wider basis ".

He added that the next clause laid down definitely that the Committee intended the principles it had adopted to be maintained.

THE CHAIRMAN preferred the deletion of the whole of the final phrase altogether after the words : " which is annexed to the present report ", and those words would end section *c*).

He added that if any really useful modifications came to the notice of the Directing Committee, the latter would not fail to propose them to the 1931 Conference.

(*The Chairman's proposal was adopted. Consequently section* c) *ends with the words: " annexed to the present report "*).

*d*) " The Committee is of opinion that the scheme which it proposes should be adopted provisionally and should be embodied in the Staff Regulations, leaving it to the discretion of the Directing Committee to adjust the wording of the rules, for which it has only sought to lay down the guiding principles ".

(*Adopted without discussion*).

*c*) " Moreover, however improbable such eventualities may appear, the Committee considers it necessary that special provision be made in the Statutes of the Bureau to protect the Retirement Fund for the Staff in case of serious financial difficulties or the suppression of the Bureau, with a view to preventing the funds set aside for this purpose being absorbed by the Bureau's other creditors. It therefore suggests the following amendments to the Statutes for adoption by the Conference :

" I. The addition of the following paragraph to Article 43 : —

h) " The sums set aside for the constitution of the Retirement Fund for the Staff in accordance with the provisions of the Staff Regulations shall be earmarked for the service of the Retirement grants and as a guarantee therefor, and thus may not be employed, even temporarily, or any other purpose. They shall not be subject to seizure by any creditor who is not a member of the staff of the Bureau, nor be deposited with such person as security ".

MR. ALBERT (I. H. B.) (translation) said that it would not be logical to prohibit the staff from distraining upon the Retirement Fund.

CAPTAIN HOOYKAAS (Netherlands) suggested a more complete draft : " *A Retirement Fund for the staff shall be formed.* The sums set aside for the constitution of this fund... ".

Mr Albert (I. H. B.) (translation) replied that it would then become a statutory provision.

The Secretary General thought indeed that the principle was a matter for the Statutes, whilst the details would be settled in the Regulations.

Captain Hooykaas (Netherlands) added that the proposed addition to Article 43 of the Statutes mentioned a Retirement Fund as existing, but there had been no previous question of this fund in the Statutes themselves.

Mr. Albert (I. H. B.) (translation) compared the two provisions concerning this particular point. The amendment suggested by Captain Hooykaas was: " A Retirement Fund for the staff shall be formed ". On the other hand, the Statutes stated in an article which already existed : " The personnel shall consist of a Secretary General and a certain number of... etc.".

According to the first article of the draft scheme the Retirement Fund was established for the non-elected members of the staff ".

The Secretary General pointed out that he himself was not elected.

Mr. Albert (I. H. B.) (translation) noted that in that case the expression : " each non-elected member of the staff... " in the first article of the draft scheme was unnecessary.

The Secretary General confirmed that he was not elected but chosen by the Directing Committee out of three candidates nominated by the Conference.

Commander Etchart (Argentine) (translation) thought this system was an indirect election, but an election nevertheless.

Captain Hooykaas (Netherlands) recalled the explanation given during another meeting concerning the expression " non-elected ", the existence of which appeared to him unnecessary.

The Secretary General said that the original mistake occurred in the regulation which placed him among the staff of the Bureau, whereas he was really an administrator of the Bureau.

Mr. Albert (I. H. B.) (translation) agreed that there was no further object in maintaining the words : " non-elected " in the first article of the draft scheme and thought that the second sentence of the said article should be corrected as follows : " every member of the staff of the International Hydrographic Bureau shall, with the exception of the Secretary General and subject to the condition contained in paragraph *c*) 1, receive on the date of the cessation of his service... ".

(*The Committee unanimously accepted this new draft in amendment of its decision at the beginning of the meeting relative to section* a) *of the draft scheme for the Retirement Fund*).

Mr. Albert (I.H.B.) (translation) then reverted to the supplementary proposal to Article 43 of the Statutes and noted that section *h*) would read as follows : " A Retirement Fund for the staff with the exception of the Secretary General shall be formed. The sums set aside for the constitution of this fund in accordance with the provisions of the Staff Regulations shall be earmarked for the service of the Retirement grants and as a guarantee

understanding that it would entail no increase in the contributions of the States Members.

THE SECRETARY GENERAL explained that no increase was to be expected as long as the staff remained what it was and as long as the Bureau was not entrusted with any further work. If more work had to be done, the I. H. B. would require a larger staff to deal with it.

MR. ALBERT (I.H.B.) added that the Retirement Fund itself would lead to no increase in the contributions of States Members, but that additions to the staff might possibly become necessary.

COMMANDER ETCHART (Argentine) (translation) understood that such an increase in the expenses might also come as the result of the creation of a Retirement Fund and he reminded the Committee once more of the very definite conditions under which the decision of principle had been made by the Conference.

THE CHAIRMAN put to the vote the two suggestions which had been made : —

10% with interest for the first ten years,
10% without interest.

CAPTAIN HOOYKAAS (Netherlands) did not wish the question to be put thus, because if the 2% rate were to be increased he would not press his proposal to let interest accrue to the account of the employee, while he would maintain his proposal if the 2% rate remained as it was.

Personally he would prefer to see an increase in the 2% rate, because he understood the necessity of the Invalidity Fund.

THE CHAIRMAN asked the Committee whether they would choose, for instance, between the 5% and 2% rate after ten years.

COMMANDER ETCHART (Argentine) (translation) was in favour of 5%.

LIEUTENANT SLIWERSKI (Poland) (translation) admitted that this would not be excessive, but apprehended the budgetary consequences of such a decision.

THE SECRETARY GENERAL thought that 5% after ten years would mean an expense of 4,000 francs per annum.

COMMANDER MIURA (Japan) agreed to the figure of 5%.

THE CHAIRMAN then read the new text of *b*):

> " The Fund shall be constituted by the deposit of a sum equivalent to 10% of the salary of every member of the staff during the first ten years of his period of service and 5% of his salary during the remainder of his service, *without interest during the first ten years* ".

(*This draft was approved unanimously*).

The second section of *b*) was amended as follows : —

" The Bureau shall contribute to the Fund the total amount of *these payments...* " (the rest of the paragraph as in the original text).

(*Paragraph* b) *was adopted as amended*).

" *c*) 1. Employees who leave with less than 2 years' service will receive no payment from this Fund ".

(*Adopted without discussion*).

" *c*) 2. An employee who leaves the Bureau after completing 2 years' service and before he has 10 years' service will receive the sum with which he is credited in the Fund, with no interest ".

Captain Hooykaas (Netherlands) thought that the words " the sum with which he is credited in the Fund " were quite clear and that the words " with no interest " were unnecessary and should be deleted.

(*These words were deleted*).

(*Paragraph* c) 2 *was adopted as amended*).

" *c*) 3. On completion of 10 years' service the Bureau will contribute 5% of the employee's total annual salary but interest will commence to be credited to the employee's account, and an employee who leaves thereafter will receive the sum standing to the credit of his account in the fund, on the date of termination of his employment ".

In answer to a question from Commander Miura (Japan), Captain Hooykaas (Netherlands) said that the interest accrued from the beginning but would only be credited to the account of the employee after ten years.

Mr. Albert (I. H. B.) noted that at the end of each paragraph one could find the expression "credited to his account in the Fund". This drafting might be improved. It would be enough to say at the beginning of the regulations that when the employee left the Bureau he should receive what had been credited to his account in the Fund. It would suffice to say " what was credited to his account ".

(These drafting amendments were noted for the final draft, as the Committee only wished to decide on questions of principle).

(*Paragraph* c) 3 *was adopted with the above reserve*).

" *c*) 4. Should an employee be granted an increase of salary after he has completed 10 years of service, the amount standing to his credit in the fund, on which interest is drawn, will be augmented at the same time by a sum equal to the increase of salary granted and interest on this augmented sum will be credited to his account in the fund, as mentioned in 3 ".

Lieutenant Sliwerski (Poland) (translation) did not think this text was very clear.

THE SECRETARY GENERAL explained its purpose. It was that a sum equal to ten times 10%, i. e. the annual salary should always bear interest. In case the salary were increased, the sum credited to the employee would have to be increased accordingly.

THE CHAIRMAN considered the following instance. The employee receives a salary of 2,000 francs per annum during the first ten years. At the end of ten years he is therefore credited in the Retirement Fund with 2,000 francs. This employee continues his service with the same salary. After the twelfth year he obtains an increase of 500 francs.

THE SECRETARY GENERAL explained how paragraph 4 would work in this case. The sum credited to the employee would increase by 500 francs when the salary was increased.

MR. ALBERT (I. H. B.) added that the sum credited to the employee at that time would no longer be 2,000 francs but more, and 500 francs would be added to that sum.

THE CHAIRMAN took another instance. that of an employee receiving 2,000 francs per annum during six years and 2,500 from the seventh year.

THE SECRETARY GENERAL said that at the tenth year the sums to his credit would be increased to 2,500 francs in conformity with his actual salary.

(*Paragraph* c) 4 *was adopted*).

" *c*) 5. In calculating the interest due, periods of service of less than half a year will be neglected ".

(*Paragraph* c) 5 *was adopted without discussion*).

" *d*) There will be no separate investment of the fund ; it will be dealt with in the same way as the Bureau's reserve ".

MR. ALBERT (I. H. B.) explained the reason for this paragraph was to avoid the necessity of investing money and also to avoid requests from employees that money should be invested in any particular way.

Since, however, the Fund remained the property of the I. H. B., this clause seemed unnecessary.

THE SECRETARY GENERAL considered that paragraph (*d*) should only be read as an indication that no speculation should be considered.

THE CHAIRMAN reminded the Committee that the possibility of the suppression of the Bureau had been considered by another Committee. He thought that should this case arise the Retirement Fund should be invested in such a way that the staff should not have to bear any deficit and should receive the total amount of the Retirement Fund.

THE SECRETARY GENERAL admitted that the staff should have a privileged claim on this Fund.

MR ALBERT (I. H. B.) thought such a privilege could only result from legislation. It should therefore be created by the Statutes.

CAPTAIN HOOYKAAS (Netherlands) suggested the insertion of a clause to the effect that the Fund could not in any case be used to cover a financial deficit of the I. H. B.

Mr. Albert (I. H. B.) answered that such a provision could only result from law.

The Secretary General thought that the Committee might suggest to the Conference the addition to the Statutes of an article under which the Retirement Fund for the personnel could not be used to cover a financial deficit of the I. H. B.

If such a clause were inserted in the Statutes it would be effective because the Statutes had been given the force of law in the Principality of Monaco.

Captain Hooykaas submitted a slightly different text, which might be reworded : —

> " The Fund will remain separate from the other funds of the Bureau ".

The Chairman was afraid this might lead to confusion. The inclusion in the Statutes of the article suggested would constitute a contradiction between the Statutes and paragraph *d*) under which " there will be no separate investment of the fund ".

The Secretary General pointed out that there might be a separate account although the investment remained the same.

The last sentence in paragraph *d*) might be suppressed if the Statutes provided the necessary guarantee.

Mr. Albert (I. H. B.) thought the whole of paragraph (*d*) might be deleted.

The Secretary General considered that in such a case the Bureau would decide how the Fund would be invested.

Commander Etchart (Argentine) (translation) was in favour of deleting the whole of paragraph *d*).

The Secretary General admitted that if the Statutes provided the necessary guarantee paragraph *d*) became unnecessary, especially as the Fund was the property of the I. H. B.

(*Paragraph* d) *was suppressed*).

Lieutenant Sliwerski (Poland) (translation) reminded the Committee that the above suppression would necessitate an addition to the Statutes.

Mr. Albert (I. H. B.) suggested the following text:

> " The Committee decides to delete paragraph *d*) and to prepare an article for insertion in the Statutes in order to safeguard the Retirement Fund in case of dissolution of the I. H. B. ".

(*This was adopted unanimously*).

> " *e*) (becoming *d*) When an employee has completed 10 years of service, the sum with which he is credited will be brought up to the amount of his annual salary at that time and will then draw interest, as mentioned in *c*) 3".

(*Adopted without discussion*).

"*f*) (becoming *e*) The contributions for an employee who, on leaving the Bureau, has received a payment from this Fund on account of retirement and who is reengaged :—

1. Will, if his previous service is less than 10 years, be recommenced as if he had not left the Bureau but, on completion of 10 years' total service in the Bureau, that part only of the fund which has been contributed on his account since his reengagement will draw interest".

THE CHAIRMAN suggested that paragraph (*f*) 1 should be replaced by a text meaning :—

"When an employee has left the service of the Bureau and has been reengaged, he will be treated as an entirely new employee"

This would be justified ; when an employee had left the service he would have had the benefit of the Retirement Fund. If he came back he should, like the others, take his chance of attaining ten years' service.

CAPTAIN HOOYKAAS (Netherlands) thought that under these conditions paragraph *f*) 1 might be deleted.

THE SECRETARY GENERAL said that if an employee left the I. H. B. he received his share of the Retirement Fund. If he came back the Bureau would continue payment as if the employee had not left until ten years' service had been completed; it seemed that the method suggested by the Chairman would be to the advantage of that employee.

MR. ALBERT (I. H. B.) pointed out that since the advantage of the Retirement Fund decreased as the years of service increased, an employee after fifteen years' service would receive less from the I. H. B. than one with only five years' service. The deletion of the paragraph as suggested by the Committee would have the contrary effect, since it appeared from the text submitted that the Committee did not want to favour the employee who had left the service and came back later. This question should be examined closely, because the new proposal would in practice be still more advantageous than the previous one for the employee who had left and returned.

CAPTAIN HOOYKAAS (Netherlands) thought that the employee would receive practically the same amount if account were taken of the interest. He proposed the deletion of that paragraph.

THE SECRETARY GENERAL would prefer to leave two lines to say that when an employee had left the I. H. B. and had been reengaged he would be considered as a new employee.

LIEUTENANT SLIWERSKI (Poland) (translation) and COMMANDER MIURA (Japan) approved the proposal made by the Secretary General.

CAPTAIN HOOYKAAS (Netherlands) thought the clause suggested by the Secretary General should rather be found in the regulations for the personnel than in those relating to the Retirement Fund.

THE SECRETARY GENERAL pointed out that in his opinion the regulations for the Retirement Fund would become part of the regulations for the personnel as soon as they had been adopted.

CAPTAIN HOOYKAAS (Netherlands) was of opinion that there were two different sets of regulations.

THE SECRETARY GENERAL emphasised the necessity of informing the employee of his rights and duties under both sets of regulations when he was being engaged. Those regulations would in practice constitute a whole. The question of the 5% to be paid by the Bureau was already dealt with in the regulations for the personnel. This clause would disappear as a consequence of the creation of a Retirement Fund.

LIEUTENANT SLIWERSKI (Poland) (translation) did not think that paragraph *f*) 1 should be omitted entirely.

COMMANDER MIURA (Japan) shared the opinion of Captain Hooykaas that the proposal of the Secretary General, under which an employee who had left the service and been reengaged would be treated as a new employee, should rather be inserted in the regulations for the personnel.

THE CHAIRMAN asked the Committee whether they intended to delete the whole paragraph and replace it by a clause as follows : —

> " A member of the staff who has left the Bureau and is reappointed shall be treated as a new member ".

(*This was decided*).

> " *g*) (becoming *f*) On the establishment of this fund the sums placed to the credit of the existing personnel, under Art. 10, paragraph *c*), clause iii of the existing Regulations for the Office Staff (January, 1928) will be increased by the amounts necessary to bring them up to such total as they would have attained had the Bureau set aside 10% of the annual salaries paid to each employee since he joined the Bureau ".

THE SECRETARY GENERAL explained that the aim of this paragraph was to put all the personnel upon an equal footing and especially to avoid refusing older employees advantages which would be granted to new ones.

(*Paragraph* g) *was adopted without discussion*).

> " *h*) (becoming *g*) The sums credited to employees who leave before completing two years of service will be entered into a special fund, entitled " Death and Invalidity Fund ", which will be employed to furnish special grants in cases of death or retirement through invalidity of employees should the Directing Committee consider that any such cases are worthy of special consideration ".

(*Paragraph* h) *was adopted without discussion*).

> " *i*) (becoming *h*) The interest drawn on the sums lying to the credit of employees who have not completed 10 years' service in the Bureau shall, unless the Directing Committee decides to the contrary, be placed to the credit of the " Death and Invalidity Fund ".

CAPTAIN HOOYKAAS (Netherlands) considered the possibility of a fund which would reach very high figures.

THE SECRETARY GENERAL answered that for this very reason the Committee might decide to use the interest for some other purpose. He added that the proposal had been put forward by the Assistant Treasurer of the League of Nations.

LIEUTENANT SLIWERSKI (Poland) (translation) would like an addition to this paragraph to specify above what sum the Committee might use the interest for a different purpose.

THE SECRETARY GENERAL thought that their decision would depend on circumstances.

LIEUTENANT SLIWERSKI (Poland) (translation) insisted that a minimum figure should be fixed.

THE CHAIRMAN thought that the question of a maximum and a minimum should be left for the Directing Committee to decide.

COMMANDER ETCHART (Argentine) (translation) also thought it would be difficult to fix any figure.

THE CHAIRMAN considered the following supposition.

Several employees of the I. H. B. find themselves in the same bus on the way of their office. The bus is smashed up at cross roads. Such a mishap would necessitate a very heavy payment out of the Retirement Fund.

MR. ALBERT (I. H. B.) replied that the French law, which also applied in Monaco, would treat this as a matter for workmen's compensation. An employee going to work is considered as in the same position as if he were at work, and should he meet with an accident on his way the employer would be responsible.

LIEUTENANT SLIWERSKI (Poland) (translation) was in favour of his own proposal that the minimum should be reached by the Invalidity Fund before the Directing Committee should be allowed to use the interest for another purpose.

THE SECRETARY GENERAL thought that this could be done. He added that the Fund would always receive those sums corresponding to the salaries of employees who serve less than two years and leave the Bureau without being entitled to any retirement grant.

The Directing Committee would be in a good position to keep itself informed of the gradual increase of the Death and Invalidity Fund and able to judge when the time had come to use interest for other purposes.

CAPTAIN HOOYKAAS saw no reason why a minimum figure should be fixed in paragraph *i*).

LIEUTENANT SLIWERSKI (Poland) (translation) replied that in this case he withdrew his motion.

(*Paragraph* i) *was accepted in the original text*).

THE CHAIRMAN asked Mr. Albert (I. H. B.) to revise the wording of the amendments adopted and submit the draft of the addition to the Statutes.

The Committee would examine the whole question during its next meeting on Monday afternoon at 2.30 p.m. The Conference would then have to decide.

The Secretary General suggested that the article, the addition of which would be proposed by the Committee, should be numbered in such a way as not to entail the renumbering of the other articles.

(The Committee rose at 5.15 p.m.).

# 3rd MEETING OF THE FINANCE COMMITTEE.

(15th APRIL, 1929).

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The meeting opened at 2.30 p.m., with Captain BAUM (U.S.A.) in the Chair.

## *MINUTES OF THE PRECEDING MEETINGS.*

MR. ALBERT (I. H. B.) (translation) in reply to a question from the Chair regarding the subsequent reading of the Minutes of the two preceding meetings, stated that the Minutes had been prepared in duplicate, but that he had not himself had time to read through them. It was his intention to submit the Minutes later to the members of the Committee in order that they might add any amendments they thought fit.

(*The Committee noted this communication*).

## *APPROVAL OF THE AMENDED DRAFT SCHEME FOR THE RETIREMENT FUND.*

MR. ALBERT (I. H. B.) (translation) read the various sections of the draft scheme which were again brought up for discussion.

*a*) " A *Retirement Fund* shall be established as from the date of the adoption of this proposal by the Conference. Each member of the staff of the International Hydrographic Bureau shall, subject to the condition contained in paragraph *c*) 1, receive on the date of the cessation of his services the balance standing to his credit in the Fund, provided that such termination is in conformity with the provisions of the Staff Regulations and is not due to summary dismissal on account of serious misbehaviour.

" In the case of death such balance shall be paid to the person or persons appointed by the employee ".

(*Paragraph* a) *was adopted without discussion*).

*b*) " The fund shall be constituted by the deposit of a sum equivalent to 10% of the annual salary of every member of the staff during the first ten years of his period of service and 5% of his annual salary during the remainder of his service.

" The Bureau shall contribute the total amount of these payments to the fund which shall remain the property of the Bureau and be administered by the Secretary General in accordance with such instructions as he may receive from the Directing Committee ".

(*Adopted without discussion*).

*c*) 1. " No payment out of this fund shall be made to a member of the Staff who leaves after less than two years' service ".

(*Adopted without discussion*).

2. " A member of the Staff who leaves the Bureau on completion of two years' but less than ten years' service shall receive the sums standing to his credit in the fund ".

(*Adopted without discussion*).

3. " The Bureau shall contribute 5% of the total annual salary of a member of the staff who has completed 10 years' service and as from that date such account in the Fund shall be credited with interest; a member of the staff leaving the Bureau after that period shall receive the amount standing to his credit in the Fund ".

Captain Hooykaas (Netherlands) proposed that the second part of this clause should read : " ... and as from that date such account shall be credited with *compound* interest... ".

Commander Etchart (Argentine) (translation) seconded this motion.

(*Paragraph 3 was adopted with the addition of the word "compound"*)

Commander Etchart (Argentine) (translation) again asked if it would not be wise to fix the length of the time limit during which interest would be capitalised.

Mr Albert (I. H. B.) (translation) thought that the system of the bank would be followed, i. e., every year or six months.

Commander Etchart (Argentine) (translation) said he would not insist.

4. " Should a member of the Staff receive an increase in salary after ten years' completed service, the amount standing to his credit in the fund and bearing interest shall be increased by a sum equal to the increase in salary granted and this total amount shall bear interest as laid down in sub-section 3 ".

(*Adopted without discussion*).

5. " In calculating the interest due, periods of service of less than six months shall not be taken into account ".

(*Adopted without discussion*).

*d*) " On completion of ten years' service the sum standing to the credit of a member of the Staff shall be brought up to the rate of his annual salary on that date and shall bear interest as laid down in *c*) 3. "

(*Adopted without discussion*).

*e*) " A member of the staff who has left the Bureau and is reappointed shall be treated as a new member ".

(*Adopted without discussion*).

*f*) " On the date of the establishment of this fund the amounts credited to the existing staff in accordance with Article 10, paragraph *c*), clause iii, of the present Regulations for the office Staff (January 1928) shall be increased by such amounts as may be necessary to bring them up to the total they would have reached if the Bureau had effected a deposit of 10% of the annual salary paid to every member of the staff since he joined the Bureau ".

(*Adopted without discussion*).

*g*) " The sums credited to members of the Staff who leave the Bureau before the completion of two years' service shall be paid into a special account, called the " Death and Invalidity Fund " which shall be set aside for the purpose of special grants in cases of death or retirement through invalidity of employees, should the Directing Committee consider that any such cases are worthy of special consideration ".

(*Adopted without discussion*).

*h*) " The interest drawn on the amounts standing to the credit of members of the staff who have not completed ten years' service shall, unless the Directing Committee decides otherwise, be placed to the credit of the " Death and Invalidity Fund ".

(*Adopted without discussion*).

(*The complete draft scheme for the Retirement Fund was put to the vote with the above amendments and unanimously adopted*).

## *DRAFT REPORT TO THE PLENARY CONFERENCE.*

THE CHAIRMAN invited Mr. Albert to read the draft report he had prepared for submission to the Plenary Conference. The Report would be laid before the Committee for discussion in detail.

" The Finance Committee, composed of : —

Captain BAUM (U. S. A.), Delegate of the United States Hydrographic Office ;

Commander ETCHART, Delegate of the Argentine Republic ;

Captain HOOYKAAS, Delegate of the Netherlands ;

Commander MIURA, Delegate of Japan ;

Lieutenant SLIWERSKI, Delegate of Poland ;

met under the Chairmanship of Captain Baum, U. S. N., at 2.30 p.m. on April 10th, 12th and 15th, in the offices of the International Hydrographic Bureau.

" The Committee was instructed :

" 1. to examine and report on the financial administration of the Bureau since the last Conference ;

" 2. to report to the Conference on the proposal submitted by the Bureau for a Retirement Fund for the Staff, subject to the condition laid down by the Plenary Session of April 10th that this scheme would not entail any increase in the contributions of States Members ".

(*Adopted without discussion*).

1. " After examining the accounts for 1927 and 1928 submitted in the Annual Reports published by the Bureau, the Committee requested to be shown the original signed reports on the accounts of these two years prepared by the Auditor of the League of Nations. The Committee noted the satisfactory character of these reports, the indisputable authority of which appeared to render a further and necessarily hasty supervision entirely unnecessary ".

(*Adopted without discussion*).

2. " The Committee discussed at length the draft scheme for the Staff Retirement Fund submitted by the Bureau ".

(*Adopted without discussion*).

*a*) " The Committee fully approves the principle of the creation of a Staff Retirement Fund and is of opinion that this Fund should be formed at once ".

(*Adopted without discussion*).

*b*) " After due examination of the question, it came to the conclusion that in view of the present proportion of the budget devoted to the staff, the creation of a Retirement Fund would not involve a request for an increase in the contributions of the States Members ".

(*Adopted without discussion*).

*c*) " With a view to put it into immediate effect, the Committee has amended certain items in the proposal submitted by the Bureau, whilst still considering as inadequate the advantages which the staff will receive therefrom. The Committee suggests that the Conference should adopt the scheme as amended, which is annexed to the present report and instruct the Directing Committee to submit to the Conference of 1931 a draft scheme planned on a wider basis, likely to give better advantages to the staff than those which will result from the present plan ".

Captain Hooykaas (Netherlands) thought it would be preferable that the 5th line should read : " The Committee proposes to the Conference that the scheme as amended should be adopted and *put into execution immediately after having been adopted by the Conference...* " or to add : " ... to put into execution immediately after adoption... ".

Mr. Albert (I. H. B.) (translation) pointed out that it was not the Conference but the Bureau which would put the scheme into effect.

CAPTAIN HOOYKAAS (Netherlands) said he was thinking of the proposal which followed, namely, that the Directing Committee should draw up another scheme on a " wider basis " in accordance with the terms which had just been read. As regards the future it was therefore rather a secondary matter if the Directing Committee had to begin on the basis of a provisional draft

MR. ALBERT (I. H. B.) (translation) suggested the following : " ... The Committee proposes to the Conference to adopt the *immediate execution of the scheme as amended...* " or " ...the Committee proposes to the Conference *to decide that the scheme as amended should be put into immediate execution.* "

CAPTAIN HOOYKAAS (Netherlands) accepted this draft which conveyed his idea.

MR. ALBERT (I. H. B.) (translation), nevertheless, did not think there were any grounds for Captain Hooykaas' anxiety as the first line of the scheme reads : " The Retirement Fund shall be established *as from the date of the adoption of this proposal by the Conference* ".

CAPTAIN HOOYKAAS (Netherlands) explained that this organisation would have to operate immediately after its formation ; there was no question of postponing its effects until after the 1931 Conference.

MR. ALBERT (I. H. B.) (translation), in order to carry out the idea put forward by Captain Hooykaas returned to the draft previously suggested: " The Committee proposes to the Conference that the *scheme as amended,* which is annexed to the present report, *should be put into immediate execution* ".

(*Several Delegates assented*).

CAPTAIN HOOYKAAS (Netherlands) felt a certain hesitation with regard to keeping the words : " ...whilst still considering as inadequate the advantages which the staff will receive therefrom ".

MR. ALBERT (I. H. B.) (translation) said that during one of the previous meetings he had received the impression that this was the opinion of the Committee and in particular of Captain Hooykaas himself. This was the reason why this opinion had been inserted in section *c*) of the draft report to the Conference.

CAPTAIN HOOYKAAS (Netherlands) wished to add the words : " if necessary " after " the 1931 Conference ".

THE CHAIRMAN accepted this addition. He thought that the League of Nations was at the present time considering a pension scheme which would provide its staff with a sufficient sum enabling the employee on retirement to purchase an annuity equal to about half his annual salary. He asked if that was the case.

MR. ALBERT (I. H. B.) (translation) did not think that this was an exact reproduction of the facts. The system mentioned had been in force in the League for about five or six years but would probably be modified during the coming years as it had been found inadequate.

The Chairman added that whatever the system might be, he thought that when the League had put its organisation for providing a grant on retirement into force, whether that system was the present system or a different one, it would be advisable for the I. H. B. to consider the possibility of adopting it for the purposes of its own Retirement Fund. It seemed quite natural to him that all international organisations should adopt a system to which the League had given definite effect. Otherwise he was quite in agreement with Captain Hooykaas.

Captain Hooykaas (Netherlands) thought that the Plenary Session had adopted the principle of a Retirement Fund and not that of an insurance fund. Further, he asked whether the expression : "*likely to give* better advantages to the staff..." conveyed the idea in the mind of the Committee during its previous meeting. As clearly set out in the following paragraph, only the draft might be changed, the principles must stand as adopted and approved by the Committee.

Mr. Albert (I.H.B.) (translation) thought the following explanation might serve as a reply to Captain Hooykaas.

The League of Nations paid to a member of the staff leaving its service a certain sum ; this was neither by way of insurance, nor was it a pension. It was a definite sum determined exactly as in the Retirement Fund contemplated by the I. H. B. This sum was calculated so as to allow the employee on leaving the service to purchase an annuity. He was not obliged to do so, but was at liberty to purchase the annuity if he wished. In calculating this sum the insurance rate was taken as a basis.

The Chairman stated that in order that the words referred to might not lead to the rejection of the draft scheme for the Retirement Fund by the Plenary Session, he would prefer to delete the final phrasing of section *c*): "... and to instruct the Directing Committee to submit to the 1931 Conference a draft scheme planned on a wider basis, likely to give better advantages to the staff than those which will result from the present plan ".

He added that the Directing Committee had the welfare of the staff sufficiently at heart to propose to the Conference any improved plan which might come to its knowledge, such for instance, as the scheme which the League of Nations might subsequently adopt.

Captain Hooykaas (Netherlands) only attributed a relatively restricted meaning to the words : " to submit to the 1931 Conference a draft scheme planned on a wider basis... ". It remained to be seen whether it would be possible to embody any improvements in the system, once it had been adopted, without changing either the principles or the general frame work. This clause should not be taken as implying an invitation to alter the principles themselves of the Retirement Fund.

He did not object to the proposal to delete this passage but would prefer to terminate section *c*) with the words " wider basis ", suppressing all the rest but adding the words " if necessary ". This clause would then read : "...and to instruct the Directing Committee to submit, if necessary, to the 1931 Conference a draft scheme planned on a wider basis ".

MR. ALBERT (I. H. B.) (translation) summed up the matter and thought the clause might read : " ...the Committee proposes to the Conference that the scheme as amended, which is annexed to the present report, should be put into immediate effect, and that the Directing Committee be instructed to submit, if necessary, to the 1931 Conference a draft scheme planned on a wider basis ".

He added that the next clause laid down definitely that the Committee intended the principles it had adopted to be maintained.

THE CHAIRMAN preferred the deletion of the whole of the final phrase altogether after the words : " which is annexed to the present report ", and those words would end section *c*).

He added that if any really useful modifications came to the notice of the Directing Committee, the latter would not fail to propose them to the 1931 Conference.

(*The Chairman's proposal was adopted. Consequently section* c) *ends with the words: " annexed to the present report "*).

*d*) " The Committee is of opinion that the scheme which it proposes should be adopted provisionally and should be embodied in the Staff Regulations, leaving it to the discretion of the Directing Committee to adjust the wording of the rules, for which it has only sought to lay down the guiding principles ".

(*Adopted without discussion*).

*c*) " Moreover, however improbable such eventualities may appear, the Committee considers it necessary that special provision be made in the Statutes of the Bureau to protect the Retirement Fund for the Staff in case of serious financial difficulties or the suppression of the Bureau, with a view to preventing the funds set aside for this purpose being absorbed by the Bureau's other creditors. It therefore suggests the following amendments to the Statutes for adoption by the Conference :

" I. The addition of the following paragraph to Article 43 : —

h) " The sums set aside for the constitution of the Retirement Fund for the Staff in accordance with the provisions of the Staff Regulations shall be earmarked for the service of the Retirement grants and as a guarantee therefor, and thus may not be employed, even temporarily, or any other purpose. They shall not be subject to seizure by any creditor who is not a member of the staff of the Bureau, nor be deposited with such person as security ".

MR. ALBERT (I. H. B.) (translation) said that it would not be logical to prohibit the staff from distraining upon the Retirement Fund.

CAPTAIN HOOYKAAS (Netherlands) suggested a more complete draft : " *A Retirement Fund for the staff shall be formed.* The sums set aside for the constitution of this fund... ".

Mr Albert (I. H. B.) (translation) replied that it would then become a statutory provision.

The Secretary General thought indeed that the principle was a matter for the Statutes, whilst the details would be settled in the Regulations.

Captain Hooykaas (Netherlands) added that the proposed addition to Article 43 of the Statutes mentioned a Retirement Fund as existing, but there had been no previous question of this fund in the Statutes themselves.

Mr. Albert (I. H. B.) (translation) compared the two provisions concerning this particular point. The amendment suggested by Captain Hooykaas was: " A Retirement Fund for the staff shall be formed ". On the other hand, the Statutes stated in an article which already existed : " The personnel shall consist of a Secretary General and a certain number of... etc.".

According to the first article of the draft scheme the Retirement Fund was established for the non-elected members of the staff ".

The Secretary General pointed out that he himself was not elected.

Mr. Albert (I. H. B.) (translation) noted that in that case the expression : " each non-elected member of the staff... " in the first article of the draft scheme was unnecessary.

The Secretary General confirmed that he was not elected but chosen by the Directing Committee out of three candidates nominated by the Conference.

Commander Etchart (Argentine) (translation) thought this system was an indirect election, but an election nevertheless.

Captain Hooykaas (Netherlands) recalled the explanation given during another meeting concerning the expression " non-elected ", the existence of which appeared to him unnecessary.

The Secretary General said that the original mistake occurred in the regulation which placed him among the staff of the Bureau, whereas he was really an administrator of the Bureau.

Mr. Albert (I. H. B.) (translation) agreed that there was no further object in maintaining the words : " non-elected " in the first article of the draft scheme and thought that the second sentence of the said article should be corrected as follows : " every member of the staff of the International Hydrographic Bureau shall, with the exception of the Secretary General and subject to the condition contained in paragraph *c*) 1, receive on the date of the cessation of his service... ".

*(The Committee unanimously accepted this new draft in amendment of its decision at the beginning of the meeting relative to section* a) *of the draft scheme for the Retirement Fund).*

Mr. Albert (I.H.B.) (translation) then reverted to the supplementary proposal to Article 43 of the Statutes and noted that section *h*) would read as follows : " A Retirement Fund for the staff with the exception of the Secretary General shall be formed. The sums set aside for the constitution of this fund in accordance with the provisions of the Staff Regulations shall be earmarked for the service of the Retirement grants and as a guarantee

therefor, and thus may not be employed, even temporarily, for any other purpose. They shall not be subject to seizure by any creditor who is not a member of the staff of the Bureau, nor be deposited with such person as security".

(*The above draft was adopted*).

"II. The following paragraph to be substituted for Article 63, paragraph 1;

1. "The staff shall be reduced to a minimum and each member shall, on the day of the termination of his services, receive the sums due to him in accordance with the Staff Regulations, either as payment in lieu of notice or as a balance from the Retirement Fund or in any other manner. The rights of the staff with respect to the assets of the Bureau shall be privileged".

THE SECRETARY GENERAL explained that this proposal was drafted in this manner because the first paragraph of Article 63 of the Statutes specified that each member of the staff should receive three months salary, while the Staff Regulations, in case of dismissal, laid down various compensatory grants according to the category of the employee. For this reason the proposed amendment referred to the Staff Regulations without fixing any definite figure, as the figures varied according to the circumstances.

(*Paragraph II thus amended was adopted*).

"The Statutes of the Bureau having been given the force of law in the Principality by a Sovereign Ordinance of H.S.H. the Prince of Monaco, the Committee is of opinion that the modifications suggested above will fully attain the end in view".

(*Adopted without discussion*).

THE CHAIRMAN noted that the Finance Committee had finished its task and he thanked the members for their conscientious co-operation.

The draft report to the Conference in French and English would be circulated among the members of the Conference before the question came up for discussion in Plenary Session.

MR. ALBERT (I. H. B.) (translation) said that the report would be circulated before the following evening.

THE CHAIRMAN asked if any member of the Committee would care to put any further question, and on receiving no reply closed the meeting of the Committee, at 3.40 p.m.

# REPORT OF THE FINANCE COMMITTEE.

The Finance Committee, composed of : —

Captain BAUM (U.S.N.), Delegate of the United States Hydrographic Office ;

Commander ETCHART, Delegate of the Argentine Republic ;

Captain HOOYKAAS, Delegate of the Netherlands ;

Commander MIURA, Delegate of Japan ;

Lieutenant SLIWERSKI, Delegate of Poland ;

met under the Chairmanship of Captain Baum, U. S. N., at 2.30 p.m. on April 10th, 12th and 15th, in the offices of the International Hydrographic Bureau.

The Committee was instructed : —

1. to examine and report on the financial administration of the Bureau since the last Conference ;
2. to report to the Conference on the proposal submitted by the Bureau for a Retirement Fund for the Staff, subject to the condition laid down by the Plenary Session of April 10th that this scheme would not entail any increase in the contributions of States Members.

1. After examining the accounts for 1927 and 1928 submitted in the Annual Reports published by the Bureau, the Committee requested to be shown the original signed reports on the accounts of these two years prepared by the Auditor of the League of Nations. The Committee noted the satisfactory character of these reports, the indisputable authority of which appeared to render a further and necessarily hasty supervision entirely unnecessary.

2. The Committee discussed at length the draft scheme for the Staff Retirement Fund submitted by the Bureau.

*a)* The Committee fully approves the principle of the creation of a Staff Retirement Fund and is of opinion that this Fund should be formed at once.

*b)* After due examination of the question, it came to the conclusion that in view of the present proportion of the budget devoted to the staff, the creation of a Retirement Fund would not involve a request for an increase in the contributions of the States Members.

*c*) With a view to putting it into immediate effect, the Committee had amended certain items in the proposal submitted by the Bureau, whilst still considering as inadequate the advantages which the staff will receive therefrom. The Committee proposes to the Conference that the scheme as amended, which is annexed to the present report, should be put into immediate execution.

*d*) The Committee is of opinion that the scheme which it proposes should be adopted provisionally and should be embodied in the Staff Regulations, leaving it to the discretion of the Directing Committee to adjust the wording of the rules, for which it has only sought to lay down the guiding principles.

*e*) Moreover, however improbable such eventualities may appear, the Committee considers it necessary that special provision be made in the Statutes of the Bureau to protect the Retirement Fund for the Staff in case of serious financial difficulties or the suppression of the Bureau, with a view to preventing the funds set aside for this purpose being absorbed by the Bureau's other creditors. It therefore suggests the following amendments to the Statutes for adoption by the Conference : —

I. The addition of the following paragraph to Article 43 : —

*h*) A Retirement Fund for the Staff with the exception of the Secretary General shall be formed. The sums set aside for the constitution of this Fund in accordance with the provisions of the Staff Regulations shall be earmarked for the service of the Retirement grants and as a guarantee therefor, and thus may not be employed, even temporarily, for any other purpose. They shall not be subject to seizure by any creditor who is not a member of the Staff of the Bureau, nor be deposited with such person as security.

II. The following paragraph to be substituted for Article 63, paragraph 1.

1. The Staff shall be reduced to a minimum and each member shall, on the day of the termination of his services, receive the sums due to him in accordance with the Staff Regulations, either as payment in lieu of notice or as a balance from the Retirement Fund or in any other manner. The rights of the Staff with respect to the funds of the Bureau shall be privileged.

The Statutes of the Bureau having been given the force of law in the Principality by a Sovereign Ordinance of H.S.H. the Prince of Monaco, the Committee is of opinion that the modifications suggested above will fully attain the end in view.

## Appendix to the Report of the Finance Committee. Scheme of a Retirement Fund for the Staff.

*a*) A *Retirement Fund* shall be established as from the date of the adoption of this proposal by the Conference. Each member of the staff of the International Hydrographic Bureau, with the exception of the Secretary General, subject to the condition contained in paragraph *c*), sub-section 1, shall receive on the date of termination of his services the balance standing to his credit in the Fund, provided that such termination is in conformity with the provisions of the Staff Regulations and is not due to summary dismissal on account of serious misbehaviour.

In case of death such balance shall be paid to the person or persons appointed by the member of the staff.

*b*) The Fund shall be constituted by the deposit of a sum equivalent to 10% of the annual salary of every member of the staff during the first ten years of his period of service and 5% of his annual salary during the remainder of his service.

The Bureau shall contribute to the Fund the total amount of these payments, which shall remain the property of the Bureau and be administered by the Secretary General in accordance with such instructions as he may receive from the Directing Committee.

*c*) 1. No payment from this Fund shall be made to a member of the staff who leaves after less than two years' service.

2. A member of the staff who leaves the Bureau on completion of two years' but less than ten years' service shall receive the sum standing to his credit in the Fund.

3. The Bureau shall contribute 5% of the total annual salary of a member of the staff who has completed 10 years' service and as from that date such account in the Fund shall be credited with compound interest ; a member of the staff leaving the Bureau after that period shall receive the amount standing to his credit in the Fund.

4. Should a member of the staff receive an increase in salary after 10 years' completed service, the amount standing to his credit in the Fund and bearing interest shall be increased by a sum equal to the increase in salary granted and this total amount shall bear interest as laid down in sub-section 3.

5. In calculating the interest due, periods of service of less than six months shall not be taken into account.

*d*) On completion of 10 years' service, the sum standing to the credit of a member of the staff shall be brought up to the rate of his annual salary on that date and shall bear interest as laid down in *c*) 3.

*e*) A member of the staff who has left the Bureau and is reappointed shall be treated as a new member.

*f*) On the date of the establishment of this Fund the amounts credited to the existing staff in accordance with Article 10, paragraph *c*), clause iii, of the present Regulations for the Office Staff (January 1928) shall be increased by such amounts as may be necessary to bring them up to the total they would have reached if the Bureau had effected a deposit of 10% of the annual salary paid to every member of the staff since he joined the Bureau.

*g*) The sums credited to members of the staff who leave the Bureau before the completion of two years' service shall be paid into a special account, called the "Death and Invalidity Fund", which shall be set aside for the purpose of special grants in cases of death or retirement through invalidity of employees, should the Directing Committee consider that any such cases are worthy of special consideration.

*h*) The interest drawn on the amounts standing to the credit of members of the staff who have not completed ten years' service shall, unless the Directing Committee decides otherwise, be placed to the credit of the "Death and Invalidity Fund".

FOURTH PART.

# Δ LAYING of the FOUNDATION STONE

OF THE

## INTERNATIONAL HYDROGRAPHIC BUREAU.

At 15.00 on Saturday, 20th April 1929, H.S.H. Louis II, Sovereign Prince of Monaco, laid the Foundation Stone of the building which the Government of Monaco is providing for the International Hydrographic Bureau.

The ceremony was attended by Their Serene Highnesses the Hereditary Princess, Prince Pierre and their children, Princess Antoinette and Prince Rainier, as well as by the Princely household, the chief Members of the Government, the Representatives of the League of Nations, the Directing Committee of the International Hydrographic Bureau, the President and Members of the Supplementary International Hydrographic Conference and their families, the Consular Corps and many other notabilities.

The following speeches were delivered : —

### Speech Delivered by H. E. the MINISTER of STATE.

(*Translation*)

Your Serene Highnesses,

It is just a year, Your Highness, since You unveiled the Monument to those who died in the Great War, thus turning our thoughts towards the memory of mourning.

To-day, continuing the Oceanic work of Your August Father, You are about to lay the Foundation Stone of an Institute devoted to Peace erected under the aegis of the League of Nations whose Representative I salute in the name of the Princely Government — as under that of a protecting star shining through the far-spread clouds.

Then the Right Reverend, the Lord Bishop of Monaco will draw down onto the foundations of the International Hydrographic Bureau the blessing of Heaven to which the seamen of all nations and religions lift their eyes in the dark hours of extreme danger.

And we, at the time when the memorial parchment invested with noble signatures is enclosed in a metal case, will enclose therein our human wishes and hopes which beat unceasingly, like the surging of the waves, on the shores of life.

May the work of the Hydrographic Bureau, rendered easier by better and definite offices, make safer the wide ways of the ocean which are the means of communication between and of drawing together the peoples of the earth.

When, thanks to you Gentlemen of the International Conference and Bureau, the seamen and passengers, having escaped the fury or the hidden danger of the deep, send their thoughts in gratitude towards your Seat as though borne on the wings of some powerful and distant seabird, it would seem to us that, in passing, they will touch and caress the whole Principality of Monaco.

## SPEECH DELIVERED
## BY THE MARCHESE PAULUCCI DI CALBOLI BARONE
## Under-Secretary General of the League of Nations.

*(Translation)*

Your Serene Highnesses,

The generous offer made by the Principality of Monaco to endow the International Hydrographic Bureau with a new Seat, amid the wonderful surroundings of this privileged country, was learnt with deep satisfaction by the League of Nations.

It is well to recall, on this occasion, that in the very first months of the existence of the League of Nations, in July 1919, the First International Hydrographic Conference of London decided to create the International Hydrographic Bureau.

The London Conference, in choosing Monaco for the Seat of the International Hydrographic Bureau, doubtless wished to express its gratitude to that mourned Sovereign, Prince Albert I, founder of the Oceanographic Museum and Institute which are admired by the whole world.

Since then the Hydrographic Bureau, under the able direction which it has always enjoyed, has shown itself worthy of the task confided to it. Much is expected from the scientific activity of this Institution which, in the peace and exquisite surroundings of this corner of the Mediterranean, works efficiently for the solution of important and delicate questions. This Organisation has been placed under the direction of the League of Nations, this being one of the earliest examples of the application of Article 24 of the Covenant and it is officially sanctioned in the first Article of the Bureau's Statutes.

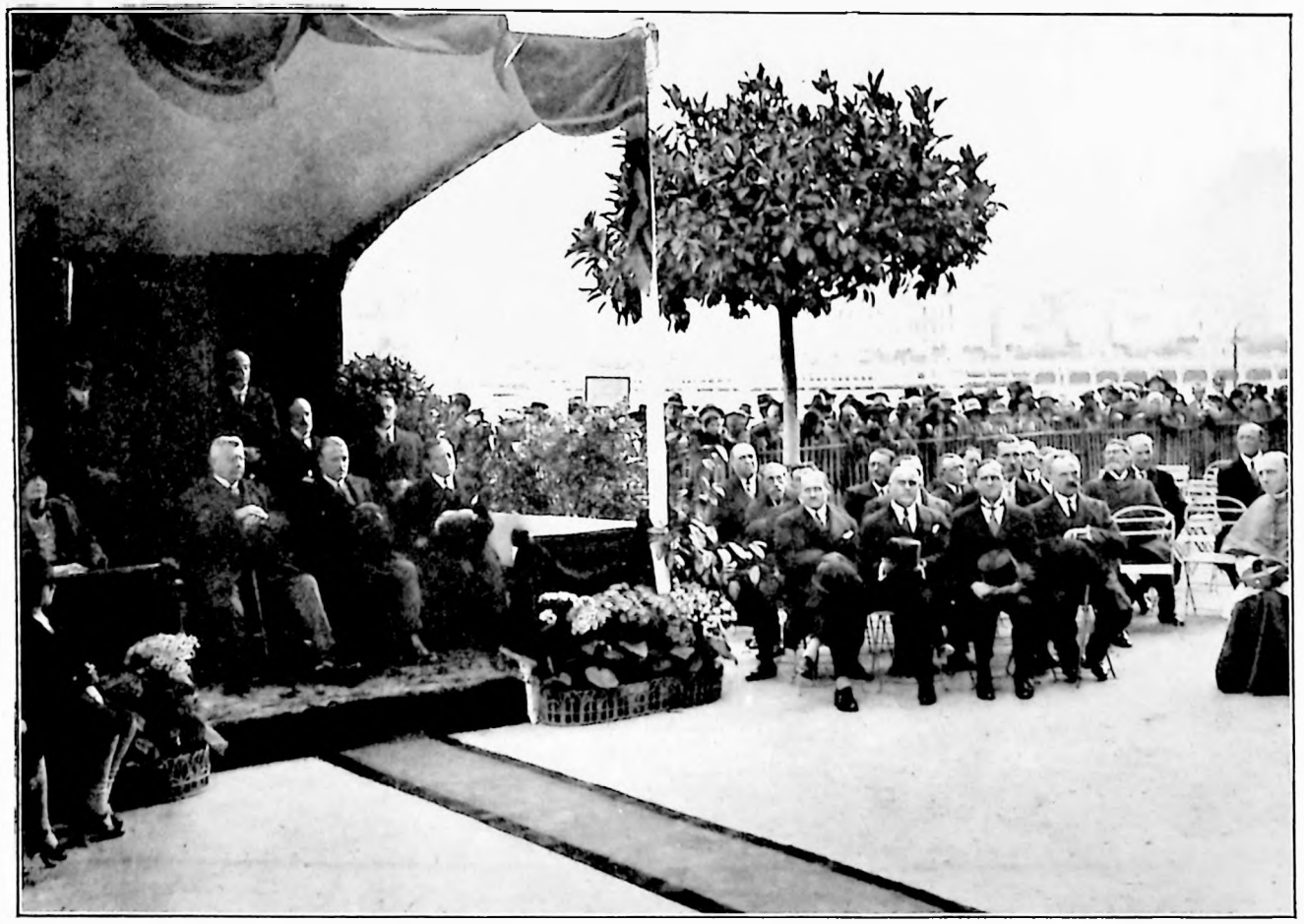
In the name of the Secretary-General of the League of Nations, Sir Eric Drummond, I have the honour to pay most respectful homage to Your Highness who, in thus so generously helping this Institution, have shown a deep sense of the solidarity of peoples. My highest respects are due also to Her Serene Highness Princess Charlotte, whose gracious presence heightens the brilliance of this ceremony, and to His Serene Highness Prince Pierre, Honorary President of the present Conference, in which He has shown continued and high interest.

My thoughts turn in respectful memory towards Prince Albert I, the learned Prince who dedicated His life to Science and who, from the very first, was a faithful supporter of the League of Nations. His spirit will certainly rejoice in this solemn ceremony to-day by which His Successors and His people assert their desire to continue to follow the trail He blazed in order further to increase the prestige of the Principality.

I am proud that the honour has been mine to be the interpreter of the sentiments of the League of Nations at this official ceremony. The League has followed and will always follow the work of this Bureau with the highest interest. Communication by sea, made easier and safer by the results of its studies, contributes to closer understanding between nations, to the development of science and to the advancement of civilization.

LAYING of the FOUNDATION STONE
OF THE I.H.B.

POSE de la PREMIERE PIERRE
DU B.H.I.



THE PRINCELY STAND.

LA TRIBUNE PRINCIÈRE.




The Foundation Stone
of the I. H. B.

La Première Pierre
du B. H. I.

## SUMMARY OF THE SPEECH DELIVERED BY REAR-ADMIRAL W.S. CROSLEY.

Admiral Crosley, having saluted the Sovereign Prince and the Princely Family and thanked the Government of Monaco for the wonderful gift which it is making to the International Hydrographic Bureau, stated that he was proud that he had been selected to be the Representative of the States Members of the Bureau on this memorable occasion.

He dwelt on the valuable services which the Bureau has rendered and will render and showed that, though primarily these are of interest to seamen, they are of importance to all.

Then he thanked the Sovereign Prince for the renewed proof of His interest in the International Hydrographic Bureau made so evident by the act of laying the Foundation Stone of the new building which is to be occupied by the Bureau and concluded by wishing Their Serene Highnesses and the Bureau long life and prosperity.

Their Serene Highnesses then signed the following parchment in duplicate as did the others mentioned therein : —

## PARCHMENT PLACED UNDER THE FOUNDATION STONE OF THE OFFICES OF THE INTERNATIONAL HYDROGRAPHIC BUREAU.

*(Translation)*

On this day, the twentieth of April, nineteen hundred and twenty nine, the Foundation Stone of the International Hydrographic Bureau, which is being erected on the Quai de Plaisance of the Harbour of Monaco, was laid with the usual ceremonies, by His Serene Highness LOUIS II, Sovereign Prince of Monaco, after it had been blessed by the Right Reverend CLEMENT, Lord Bishop of Monaco, in the presence of : —

Her Serene Highness the HEREDITARY PRINCESS of Monaco ;
His Serene Highness Prince PIERRE of Monaco ;
His Excellency M. MAURICE PIETTE, Minister of State ;
M. FRANÇOIS ROUSSEL, Secretary of State, Director of Foreign Relations ;
M. ALEXANDRE NOGHES, President of the Special Communal Delegation ;
ADMIRAL W. S. CROSLEY, President of the First Supplementary International Hydrographic Conference ;
MARCHESE GIACOMO PAULUCCI DI CALBOLI BARONE, Under Secretary-General, Representing the League of Nations ;
Ingénieur-Hydrographe Général PIERRE DE VANSSAY DE BLAVOUS and
Captain LUIGI TONTA, Members of the Directing Committee of the International Hydrographic Bureau ;
Commander G.B. SPICER-SIMSON, Secretary-General of the International Hydrographic Bureau ;
M. FERRÉOL BUTAVAND, Government Councillor for Public Works,

who, each and all, have signed this document.

One copy of this document was placed in a recess in the foundation support with two medallions bearing the effigy of the Sovereign Prince. The other copy is kept in the Archives of Monaco.

Prince Louis II then spread cement on the foundation support, and the Stone was swung into place and unveiled. The accompanying photograph shows the inscription on the Stone.

Finally the Lord Bishop of Monaco blessed the Stone.

# B. LECTURES DELIVERED by DELEGATES.

## I. ECHO-SOUNDING.

Lecture by Dr. H. MAURER read on 12th April, 1929, by CAPTAIN CLAUSSEN.

*(Translated by G.S.S.)*

The German vessel "Meteor" crossed the Atlantic Ocean fourteen times in an East and West direction and twice in a North and South direction During this cruise she took 67,000 soundings at 34,000 stations. The elaboration of these brought forward the question as to how they should be treated.

Sonic-soundings give the interval of propagation of a sound which, being produced near the ship, travels to the bottom and returns to the ship. Half of this interval multiplied by the velocity of sound gives the depth (echo-distance) subject to two hypotheses, *viz* : —

(1) that the direct distance between the points of production and reception of the sound be negligible as compared with the depth and

(2) that the point from which the echo is returned (echo-point) lies vertically below the vessel.

If the first hypothesis be not fulfilled it is easy to make the necessary corrections. As for the second hypothesis, there are two different cases : —

Usually the sound is emitted equally in all directions and thus the echo-point may be to one side of the vessel. This would give an oblique echo-distance which is less than the depth. Indeed, the "Meteor" found the sonic soundings 1.6% smaller than the wire soundings at 310 stations where both methods were used and where the velocity of sound was known accurately.

An attempt was made to eliminate this error in the sonic soundings by calculation. It was thought that it might be possible to determine the slope of the bottom from two neighbouring soundings by assuming that the bottom was flat and sloped in the direction of the course of the ship. This was

obviously a false idea. Any one sounding gives but the surface of a sphere as the geometrical locus of the echo-point, the centre of the sphere being the ship and its radius being the echo-distance. Nothing further can be deduced from two neighbouring soundings than that no echo-point can lie within these echo-distance spheres, and this gives but a minimum for the depth. In the experience of the "Meteor" the depths were frequently much greater than the echo-distances. Out of 245 comparisons of depths of over 2,000 metres (1,094 fathoms) no less than 56 cases gave a difference exceeding 100 metres (54 fms.) and the maximum difference amounted to 650 metres (355 fms.) when the wire gave 4,840 metres (2,647 fms.) depth.

The other case is that of a directed emission of ultra-sonic waves by Prof. Langevin's method. In this case the echo-point cannot be far out of the vertical from the vessel unless, on account of an inclination of the ship, the narrow cone of sound emitted be much inclined. If the cone be very narrow or the depth be sufficiently great, it is possible that a slight list of the ship or slope of the bottom will be sufficient to make the echo imperceptible at the point where the receiver is located. From this it is probable that the observed echo-distance may always be assumed to be equal to the depth. It would be very interesting to compare directed and non-directed echo-soundings with wire soundings taken all at the same point over a mountainous and sloping bottom (*e. g.* over the steep-sided bank near Cape Ortegal, see *Hydrographic Bulletin,* Monaco, N° II, 1929, page 48).

To calculate the true echo-distance the mean velocity of sound between the ship and the bottom must be known The fact that velocity of sound varies according to the temperature, salinity and pressure, is well known. The most accurate and convenient tables are those which were published by the Hydrographic Department of the British Admiralty in 1927, under the number H.D. 282 and which are entitled: "Tables of the Velocity of Sound in Pure Water and Sea-Water for use in Echo-Sounding and Sound-Ranging". The velocity of sound varies, within the local layers, from 1,400 metres (765 fathoms) per second, in cold fresh water, to 1,620 metres (890 fathoms) per second, at the bottom in the greatest depth in the world. By means of the British tables it is possible to calculate the mean velocity in any column of water between the surface and the bottom at any place where the run of the temperature and salinity in the column is known, which is the case in but a few isolated spots.

However, such data may be taken to be the same over fairly large areas for which a constant table would give the mean velocities as functions of the depths. On this principle Publication H. D. 282 gives tables for 23 areas, the limits of which are shown on a chart of the world. The "Meteor" took temperatures and salinity in all layers at 310 stations in 6 of the 23 areas of this chart. The mean velocities deduced from these observations agree fairly well with the British tables in most cases. But the northern limit of the Equatorial Area, N° 10, is placed somewhat too far south and in the cold water areas the velocity of sound is less than is shown in Table N° 10. Amongst the soundings taken at the "Meteor's" 310 stations, only 8 differ by more than 20 metres (11 fms.) from the true depths.

Thus, in the Atlantic areas covered by the "Meteor" the velocity of sound may be obtained sufficiently accurately from the tables in H.D. 282. If this be the case also for the other and less explored seas, the crude echo-distances can very well be converted into true distances by means of these tables. These true distances are equal to the depths at such places where the point on the bottom which is vertically under the ship is also the nearest point to her. This, unfortunately, is not so in the cases which are important in navigation. For navigating, the depth is of value at such places only where it can be used for fixing position and these are not in areas where the depths are uniform but in those where there are significant changes in the depth.

If, in such places, the charts gave the true depths, it would be impossible for the navigator to compare such figures with the echo-distances obtained with his sonic-sounder. It would be more practical if the seaman were given, on the chart, the echo-distance which his sounder will give him at the same place. These crude echo-distances should be given in figures which differ from those which indicate depths, but echo-distances of less than 200 metres (109 fms.) should be converted into depths and be shown on the charts in the type of figure used for depths.

Thus, on German charts, the results of sonic-sounding (over 200 metres) are entered as echo-distances, all of which are deduced from one constant velocity on which all German echo-sounding machines are based. This velocity is 1,490 metres (815 fathoms) per sec. With reference to the "Meteor's" soundings, 7,000 sounding stations have already been inserted on the charts and the average horizontal distance between two such stations is 10 sea-miles.

It would not be convenient to enter more soundings.

The crude echo-distances calculated on a single constant velocity are the most useful, not only for the seaman, for whose use the chart is primarily provided, but also for science, for thus the velocity used for deducing the figures is known immediately and with certainty and it is possible to correct them according to the most recent data available. Results of sonic-sounding which are given in the form of depths, without any indication whatsoever of the velocity on which they are based and possibly of attempts made to rectify oblique echo-distances, are practically useless to accurate science. In fact it may be said that an oblique echo-distance has never been converted into a depth, although the U. S. Coast and Geodetic Survey has published a diagram for such conversion based, unfortunately, on the false idea mentioned earlier.

It would appear, also, that crude echo-distances have never been converted into true distances ; it will be done in the report of the "Meteor's" observations, but the crude echo-distances only are inserted on the chart. With reference to the deepest spot in the world, the "Emden-Deep", on the chart the crude distance of 10,430 metres (5,703 fathoms) has been inserted and the true distance of 10,790 metres (5,900 fathoms) has been announced, this latter being based on the local velocity which is 1,542 metres (843 fathoms) per sec. The fine observations made by the Americans, the profile from Newport-News to Gibraltar determined by the U. S. S. "Stewart" in

June 1922 and the bathymetric chart covering nearly 100,000 square kilometres (33,000 square sea-miles) produced by the U. S. Ships "Corry" and "Hull" between San Francisco and Cape Descanso in November 1922, were both based on a constant velocity. This was 800 fathoms (1,463 metres) per sec. and is far below the true velocity. According to the British tables the depths of the "Stewart's" profile should be increased by from 2.5 to 3.9%, the greatest depth recorded being 3,326 fathoms (6,083 metres) instead of 3,200 fathoms (5,852 metres), and the very full details of the "Corry-Hull" bathymetric chart must be extensively corrected in several places; for example, the 2,000 fathom line, as shown, passes through depths which should really be 1,960 fathoms. This change of 40 fathoms in depth represents, in some places, a horizontal displacement of the contour of 10 sea-miles, which is very considerable for fixing the position of a ship.

If the "Meteor's" soundings were calculated on the U. S. basis of 800 fathoms, 131 of the 310 stations, namely 42%, would give echo-distances too short by over 100 metres (54 fms.). The distance at the deepest station would be 5,880 metres (3,215 fathoms) instead of 6,100 metres (3,335 fms.) and the echo-distances for the deepest spot in the South Atlantic Ocean would be 7,960 metres (4,353 fathoms) instead of 8,255 metres (4,516 fathoms). A depth of 10,240 metres (5,600 fathoms) would have been proposed for the "Emden-Deep" instead of the true echo-distance of 10,790 metres (5,900 fathoms).

As may be seen from the above, the figures used on charts for echo-distances must be different from those used for depths obtained with the sounding-line and, furthermore, it is necessary to state the sound-velocity on which the echo figures are based. An international agreement on this subject is desirable, and there are three possible ways in which this may be attained.

*A single standard velocity* may be selected for use at all times and everywhere. This is the simplest way and excludes all uncertainty and is, besides, the most practical for navigational purposes, since all the echo-soundings would be based on a scale of constant velocity of sound. Instead of the value 1,490 metres per sec. used by Germany, that proposed by Japan, namely the round number of 1,500 metres per sec., may just as well be adopted. The mean of all the values contained in N$^{os}$ 3 to 20 of the British tables (see attached table), for depths between 200 and 4,000 metres, omitting the two extremely warm seas (N$^{os}$ 1 and 2) and the three very cold seas (N$^{os}$ 21, 22 and 23), is 1,496 metres per sec. The British Admiralty gear employs a scale based on a sound velocity of 1,496.5 metres (4,910 feet) per sec.

The second method consists in adopting a *Standard Scale,* which would be used everywhere, the values in which would vary according to the depth. I have calculated a Standard Scale by taking the means, at all depths, of the figures of the British tables for Areas N$^{os}$ 3 to 20 (See "Mean Scale" column in the annexed table). The next columns show the maximum differences between the local sound-velocities and this "Mean Scale" as well as the differences from the Average Mean Value : — 1,496 metres per sec. It will be seen that the variations in sound velocity in different areas at equal

depths are very great ; the greatest differences from the Mean Scale are even larger than the differences from the Average Mean Value, A Standard Scale cannot, therefore, be recommended. *

The third way would be to have a *large number of scales for different areas,* such as, for instance, British Publication H.D. 282. By this means more accurate echo-distances would indubitably be obtained than with a single sound-velocity for all areas. But this would prove very inconvenient for the practical needs of the seaman whose echo-sounding machines have scales based on a constant sound velocity. Besides it would lead to uncertainty at the boundaries of neighbouring areas the tables for which differ largely (for instance, between areas N$^{os}$ 3 and 10, or N$^{os}$ 11 and 20) Anyway the actual goal aimed at, which is to transform echo-distances into depths, cannot be reached owing to the fact that it is impossible to take the slope and unevenness of the sea bottom into account.

These are the reasons for the German proposals. The principal objections to them which have been raised are the following : —

> " Fixing the position at sea is so uncertain that, when a given echo-distance is obtained, it cannot be said definitely that it is at the same spot as that at which the original observer had taken his echo-distance ".

Against this assertion it may be stated that, shortly, in certain areas, lines of equal echo-distance will be drawn on charts. These may be used as position lines which are of the order of accuracy of that of the original observer's work. A seaman will have recourse to this expedient when his own determination of position is unsatisfactory and thus he will attain the same degree of accuracy as was attained in the original observations made under more favourable circumstances ; naturally the Hydrographic Offices must check the accuracy of the fix at any observation the result of which is to be inserted on a chart.

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* *Note :* — Even in quite a small area such a scale may show very great differences. This can be shown, for example, by comparing the scale proposed by MURAMOTO for Japanese waters with the British scales (H.D. 282) for the northern extremity of HONDO Island (N° 21) and for the southern extremity of the same island (N° 16).

| Depth Metres | Velocity of Sound. | | |
|---|---|---|---|
| | TABLE | | |
| | MURAMOTO | N° 21 | N° 16 |
| 200 | 1507 | 1461 | 1515 |
| 1000 | 1495 | 1469 | 1493 |
| 2000 | 1489 | 1476 | 1490 |
| 3000 | 1493 | 1484 | 1494 |

| Depth m. | AREA | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | 1400 m. + | | | | | | | | | | | | | |
| 200 | 141 | 112 | 127 | 127 | 114 | 110 | 89 | 118 | 136 | 125 | 122 | 122 | 131 | 107 |
| 400 | 140 | 111 | 123 | 116 | 110 | 108 | 90 | 108 | 125 | 109 | 113 | 111 | 115 | 104 |
| 600 | 139 | 112 | 119 | 111 | 106 | 108 | 90 | 103 | 115 | 101 | 105 | 105 | 106 | 103 |
| 800 | 140 | 113 | 114 | 110 | 103 | 107 | 90 | 99 | 108 | 96 | 100 | 101 | 100 | 101 |
| 1000 | 141 | 114 | 111 | 108 | 101 | 105 | 89 | 97 | 103 | 92 | 95 | 99 | 97 | 98 |
| 1200 | 142 | 115 | 108 | 108 | 100 | 104 | 89 | 96 | 100 | 91 | 93 | 98 | 95 | 96 |
| 1400 | 144 | 117 | 106 | 108 | 100 | 102 | 89 | 94 | 98 | 90 | 92 | 97 | 93 | 94 |
| 1600 | 145 | 118 | 106 | 107 | 99 | 100 | 89 | 94 | 96 | 90 | 91 | 96 | 93 | 93 |
| 1800 | 147 | 120 | 105 | 107 | 99 | 100 | 89 | 94 | 96 | 90 | 91 | 96 | 92 | 93 |
| 2000 | 148 | 122 | 105 | 107 | 99 | 99 | 91 | 94 | 95 | 91 | 91 | 95 | 92 | 93 |
| 2200 | | 123 | 105 | 107 | 99 | 99 | 92 | 94 | 95 | 91 | 92 | 96 | 92 | 93 |
| 2400 | | 124 | 106 | 107 | 100 | 99 | 93 | 95 | 95 | 92 | 92 | 96 | 92 | 93 |
| 2600 | | 127 | 106 | 107 | 100 | 100 | 94 | 96 | 96 | 93 | 93 | 96 | 93 | 94 |
| 2800 | | 129 | 106 | 107 | 101 | 100 | 95 | 96 | 97 | 94 | 94 | 96 | 94 | 94 |
| 3000 | | 131 | 107 | 106 | 102 | 101 | 96 | 97 | 97 | 95 | 95 | 97 | 95 | 95 |
| 3200 | | | 107 | 107 | 103 | 102 | 97 | 98 | 98 | 96 | 96 | 98 | 96 | 96 |
| 3400 | | | 108 | 107 | 104 | 103 | 97 | 99 | 99 | 97 | 97 | 99 | 97 | 97 |
| 3600 | | | 109 | 108 | 105 | 104 | 99 | 100 | 100 | 98 | 98 | 100 | 98 | 98 |
| 3800 | | | 110 | 109 | 106 | 105 | 100 | 101 | 101 | 99 | 100 | 101 | 99 | 99 |
| 4000 | | | 111 | 110 | 107 | 106 | 102 | 103 | 102 | 100 | 101 | 102 | 101 | 100 |

| | | | |
|---|---|---|---|
| 1) Red Sea. | 22° N, 38° E. | 7) N. E. Atlantic Current. | 54° N, 23° W. |
| 2) Mediterranean. | 40° N, 11° E. | 8 Central Indian Ocean. | 9° S, 65° E. |
| 3) Sargasso Sea. | 24° N, 53° W. | 9) Fiji Islands Area. | 10° S, 180°. |
| 4) Arabian Sea. | 9° N, 54° E. | 10) Equatorial Atlantic Ocean. . | 5° S, 32° W. |
| 5) African Aera. | | 11) Central South Atlantic Ocean. | 20° S, 20° E. |
| 6) Gulf Stream. | 40° N, 40° W. | 12) Equatorial counter-current, Indian ocean. | 5° S, 51° E. |

# Nos 1 TO 23 OF THE PUBLICATION H D 282

| AREA | | | | | | | | | MEAN SCALE | MAXIMUM DIFFERENCE IN M. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | from Mean Scale | | | | from Average Mean - 1496 | | | |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 3 — 20 | 3 — 20 | | 1 — 23 | | 3 — 20 | | 1 — 23 | |
| 1400 m. + | | | | | | | | | m. | + | − | + | − | + | − | + | − |
| 116 | 115 | 78 | 94 | 69 | 80 | 61 | 73 | 43 | 1510,0 | 26 | 41 | 31 | 67 | 40 | 27 | 45 | 53 |
| 104 | 104 | 76 | 89 | 69 | 78 | 63 | 71 | 48 | 1502,9 | 22 | 34 | 37 | 55 | 29 | 27 | 44 | 48 |
| 98 | 98 | 76 | 85 | 70 | 75 | 65 | 70 | 51 | 1498,6 | 20 | 29 | 40 | 48 | 23 | 26 | 43 | 45 |
| 94 | 95 | 76 | 83 | 71 | 74 | 67 | 70 | 54 | 1496,9 | 17 | 26 | 43 | 43 | 18 | 25 | 44 | 42 |
| 92 | 93 | 76 | 82 | 72 | 74 | 69 | 67 | 56 | 1493,6 | 17 | 22 | 47 | 38 | 15 | 24 | 45 | 40 |
| 90 | 91 | 78 | 82 | 73 | 74 | 70 | 67 | 58 | 1491,4 | 15 | 20 | 51 | 35 | 12 | 23 | 46 | 38 |
| 90 | 90 | 79 | 82 | 74 | 75 | 72 | 67 | 60 | 1489,8 | 18 | 16 | 54 | 30 | 12 | 22 | 48 | 36 |
| 89 | 90 | 79 | 82 | 75 | 76 | 73 | 67 | 63 | 1488,6 | 18 | 14 | 56 | 26 | 11 | 21 | 49 | 33 |
| 89 | 90 | 81 | 83 | 77 | 78 | 75 | 68 | 65 | 1488,9 | 18 | 12 | 58 | 24 | 11 | 19 | 51 | 31 |
| 89 | 90 | 82 | 83 | 78 | 79 | 76 | 69 | 66 | 1490,2 | 17 | 12 | 58 | 24 | 11 | 18 | 52 | 30 |
| 90 | 91 | 84 | 84 | 79 | 81 | 78 | 70 | 68 | 1491,3 | 16 | 12 | 32 | 23 | 11 | 17 | 27 | 28 |
| 90 | 91 | 85 | 85 | 81 | 82 | 79 | 71 | 69 | 1492,4 | 15 | 9 | 32 | 23 | 11 | 15 | 28 | 27 |
| 91 | 92 | 86 | 86 | 82 | 84 | 81 | 72 | 71 | 1493,8 | 13 | 12 | 33 | 23 | 11 | 14 | 31 | 25 |
| 92 | 93 | 88 | 87 | 84 | 85 | 82 | 74 | 72 | 1494,6 | 12 | 11 | 34 | 23 | 11 | 12 | 33 | 24 |
| 93 | 94 | 89 | 89 | 85 | 87 | 84 | 76 | 74 | 1495,6 | 11 | 11 | 35 | 22 | 11 | 11 | 35 | 22 |
| 94 | 95 | 91 | 90 | 87 | 88 | | | 76 | 1496,6 | 10 | 10 | 10 | 21 | 11 | 9 | 11 | 20 |
| 95 | 96 | 92 | 91 | 88 | 90 | | | 77 | 1497,6 | 10 | 10 | 10 | 21 | 12 | 8 | 12 | 19 |
| 97 | 97 | 94 | 92 | 90 | 91 | | | 79 | 1498,8 | 10 | 11 | 10 | 20 | 13 | 6 | 13 | 17 |
| 98 | 99 | 95 | 94 | 91 | 92 | | | 80 | 1499,9 | 10 | 9 | 10 | 20 | 14 | 5 | 14 | 16 |
| 99 | 100 | 97 | 95 | 93 | 94 | | | 82 | 1501,3 | 10 | 8 | 10 | 19 | 15 | 3 | 15 | 14 |

Average Mean 1496

13) Pacific Ocean. 5° N, 180°.
14) South Indian Ocean. 33° S, 83° E.
15) Caroline Islands Area. 10° N, 180°.
16) Pacific Ocean. 10° N, 120° W.
17) Cold waters of North America. 42° N, 64° W.
18) Pacific Ocean. 40° N, 180°.
19) Pacific Ocean. 50° N, 180°.
20) Easterly Current. 40° S, 44° W.
21) Bering Sea. 55° N, 170° W.
22) Norvegian Sea. 69° N, 5° E.
23) Antarctic Ocean. 54° S, 31° W.

Such new method of fixing position will prove advantageous, not only on the continental shelf where, owing to the moderate depths, an error in velocity will have but little effect, but also on the high seas in such places where characteristic depth variations occur, such as, for instance, on the ridge which extends throughout the Atlantic Ocean from North to South.

According to another objection the use of different types of figures for soundings is to be avoided and it is stated that it should be left to each Hydrographic Office to correct echo-soundings as they may consider suitable. In this connection, it should be remembered that the number of soundings by wire will very shortly be much less than the number of echo-soundings, and that there is no great difficulty in using two different types of figures, for instance, upright and sloping figures. The difference between echo-distance and depth may be considerable, especially in those cases where erroneous velocities of sound have been adopted and of which, furthermore, no information is given. Echo-sounding is a new method and it would perhaps be imprudent if the subsequent correction of earlier echo-soundings were to be rendered impossible. This will happen, however, if it be impossible to recognise which figures represent echo-soundings and the velocity of sound which was employed. In any case, it would be wiser to put up with the slight inconvenience which results from the use of a special type of figures for non-directed echo-soundings.

As for directed echo-soundings, it would be best to convert them, as best possible, into depths, and to enter them on the chart in figures of the type used for ordinary soundings.

Naturally each nation can carry on as it thinks best, but, at the very least, it should make non-directed sonic-soundings recognisable and should publish the rules used for their calculation in order that the velocity applied in each case may be known without having to make special enquiry.

Finally I will recapitulate the German proposals.

The echo-distances (over 200 metres and obtained by non-directed sonic methods) should all be calculated on the same standard velocity and then be inserted on the charts.

The standard velocity suggested is 1,490 metres (815 fathoms) per sec. or 1,500 metres (820 fathoms) per sec. These echo-distances should be shown in figures of a type which differs from that used for depths.

Non-directed echo-soundings of less than 200 metres, and all directed echo-soundings, should be converted, as best possible, into depths and be shown on the charts in the type of figure used for depths.

Should non-directed echo-soundings which, for some reason, have been converted on the basis of some velocity other than the standard velocity be published, the velocity employed should be published at the same time.

# II. SOME RESULTS OF EXPERIMENTS IN CHART-PRINTING FROM COPPER-PLATES.

Lecture delivered on 17th April, 1929,
COMMODORE G. P. REINIUS, Swedish Hydrographer.

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Within the last few years there have been numerous changes and a great many improvements in the reproduction of nautical charts. Some of the larger hydrographic services have gradually been compelled to abandon copperplate printing in favour of lithography in order to cope successfully with the heavy demands of seafaring people. Still, most of the smaller services will probably find it more expedient, upon the whole, to continue to use the engraved copperplate. As I comprehend the matter, there will very likely be an increased use for copperplate printing in the near future. The new Norwegian engraving-machine substantially facilitates and cheapens the engraving of chart plates which up till now has been a slow and expensive process. Particularly at the smaller Hydrographic Offices where, as a rule, there is no need to publish large editions of charts in a hurry, the interest in copperplate printing will very likely be stimulated.

This being my opinion, I should like to direct attention for a few minutes to the results of some trials we have lately been making at the copperplate printing works of our Hydrographic Service. The aim we had in view was to simplify the copperplate printing as much as possible, and to try to eliminate the changes in dimensions of the chart-picture, which is not the least of the drawbacks connected with this kind of printing.

As is known, in copper-printing one generally uses a well-damped paper in order to get a clear and fine picture. Now this thorough moistening is followed by a considerable expansion of the paper. Our Swedish medium chartpaper (length 1032 mm. and width 698 mm.) increases on an average about 8 mm. in length and 16 mm. in width. The percentage of increase in the width, therefore, is three times as great as in the length. The fact is that the paper-fibres dilate much more in width than in length, and in manufacture, usually come to lie parallel with the cylinder, i. e. parallel with the longitudinal direction of the fibres.

By way of information I should perhaps mention that the chart-paper used at the Swedish Hydrographic Office consists chiefly of the chemical wood-pulp known as sulphite, with about 20% of straw-pulp added and mixed in. The paper is soft sized and, by way of filling, sulphate of lime is intermingled in the ordinary manner.

The distortion of the chart-picture is also affected by another circumstance, *viz.*, that the wet sheet is distended by the extortion of the printing-press. This enlargement amounts only to about 0.8 mm. in the length and 0.2 mm. in the width. When, however, the sheet with the newly-printed chart-picture has been put out to dry, it very nearly resumes its old dimensions.

After some days, during which the charts are stored in a room with a relative moisture of about 65%, the reproduced picture on the chart will be found to differ about 9 and 16 mm. in length and width respectively from the corresponding measures on the copperplate. These alterations in the dimensions of the picture on the chart, directly caused by the moistening to which the chart-sheet has been subjected in printing, have been ascertained by means of repeated investigations to amount to about half a degree in angular measure.

This alteration in size does not, it is true, signify very much for nautical purposes; but it undoubtedly has other drawbacks which will assert themselves in several ways during the work of adjusting the chart and completing it.

The drying of our charts after printing has, since 1925, been done in an electrical drying-machine of the same excellent type as that used by the Hydrographic Department in London. It is a very fine piece of machinery, which may be seen in Fig. 1.

Another drawback associated with the wet method is that the printing-paper must be prepared a couple of days before the printing, which, of course, hampers the adaptation of the production to meet special requirements.

Besides, this work of moistening the paper is troublesome and takes much time, not to speak of a relatively high percentage of waste. The printing is also retarded, because the blankets used absorb so much water from the damp sheets that they have to be changed and dried from time to time.

The "wet" method has yet another disadvantage, namely, that the use of transfers in the colouring of lights is rendered difficult, or even impossible. Hence the production of charts takes still more time.

In order as far as possible to eliminate, or to diminish, all these disadvantages, experiments were commenced in November 1926 which aimed at investigating whether it was possible to use all but dry paper for printing.

The most obvious thing, of course, was merely to soften the printing-surface of the paper by means of a rapid moistening. After a series of experiments in that way, the following procedure was reached : — A sponge is slightly moistened in water after the colouring and drying of the copper-plate has been almost completely finished. After that the wet sponge is rapidly passed over the sheet, which is then equally rapidly dried, with a linen cloth, in order to remove all water on the surface. The sheet is then laid immediately for printing on the plate, which rests on the printing-press table. It is of importance that the moistening should be carried out as *rapidly* as possible; the time requisite for this amounts to 30 to 45 seconds. Experience has clearly shown that the magnitude of the change in the paper is a direct function of the time taken in moistening.

Simultaneously with these experiments, trials were made with "packings" of different constructions. In the "wet" method of printing, the "packing" has consisted of four printing blankets 4 mm. thick. This "packing" was highly elastic and suitable with the wet method, but did not answer the purpose of producing a perfectly good impression when the printing-surface of the paper was merely moistened. In consequence of this, to begin with, the number of blankets was reduced to two. But the result was

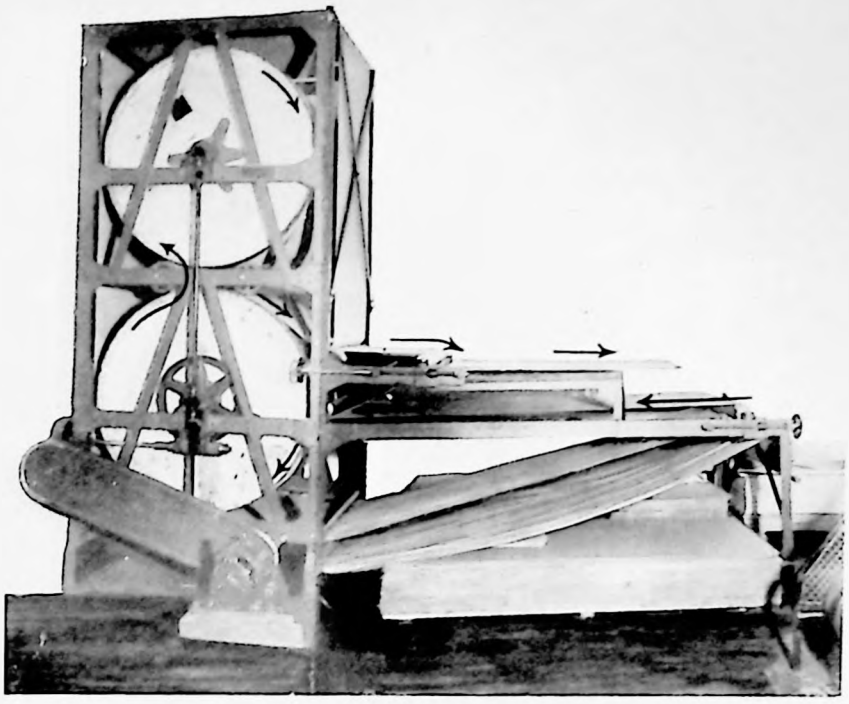


FIG. 1

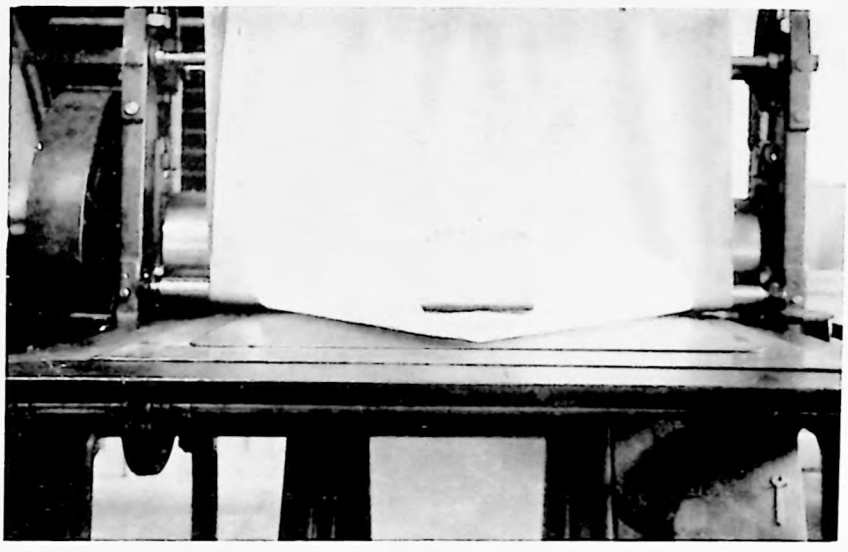


FIG. 2

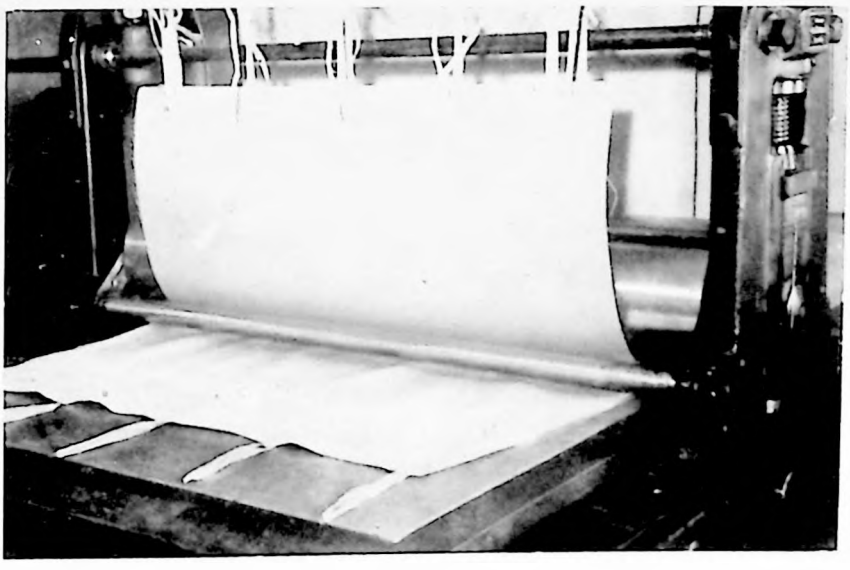


FIG. 3

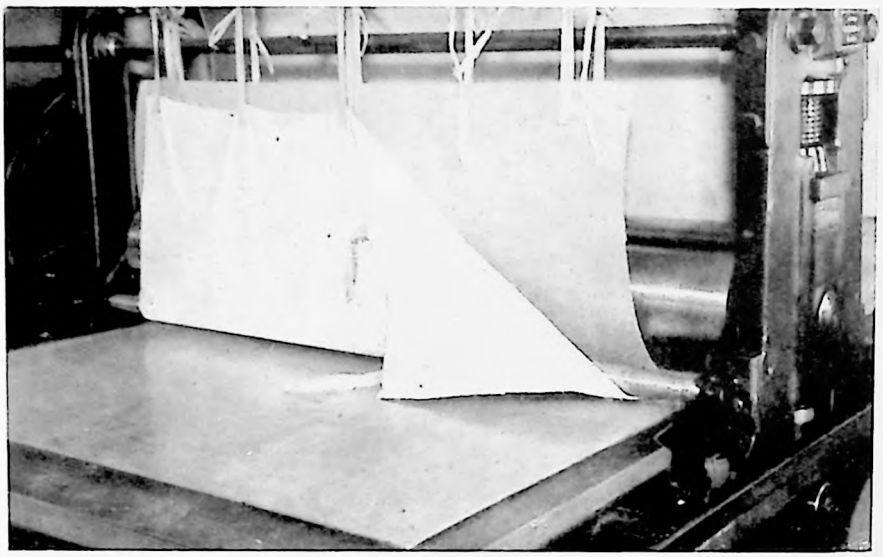


FIG. 4

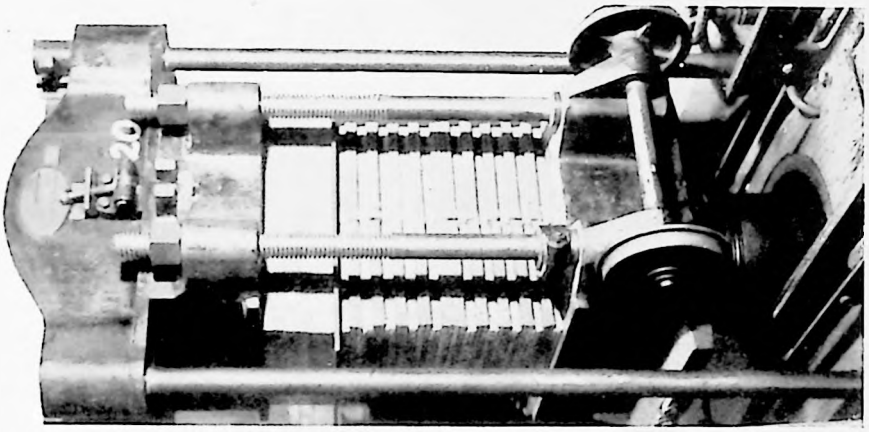


FIG. 12

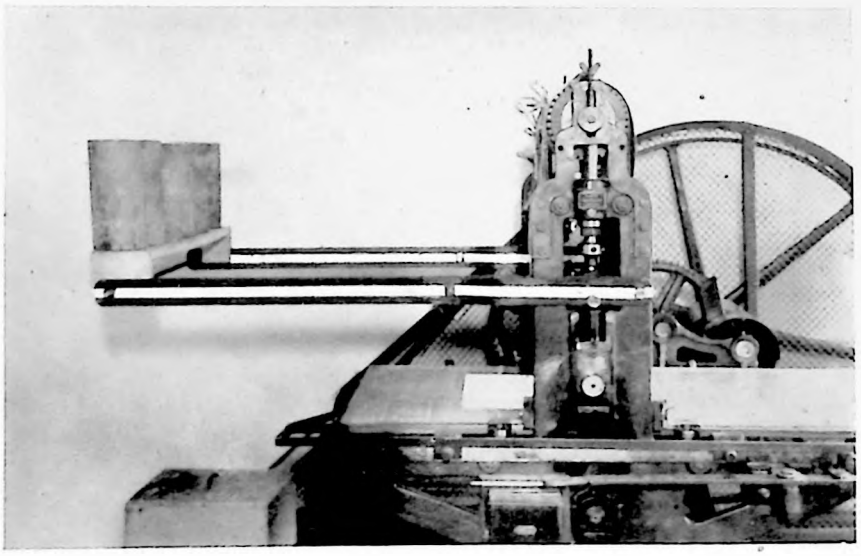


FIG. 13

not that which was intended, and consequently a rubber plate 2 mm. thick with a double layer of fabric was tried. The rubber plate was used both by itself and together with one or two blankets. As the rubber plate could not be adequately stretched, it became wrinkled during the process of printing, in consequence of which the printing paper was injured. Hence it became necessary to abandon the idea of using such an elastic plate. By using a hard " packing ", instead of this elastic one, we gradually reached the type that has now been advantageously tested for two years. This " packing " consists of a bookbinder's pasteboard 2 mm. thick, placed between two printing blankets 4 mm. thick.

When only one side of the printing-paper is *moistened*, the paper tries to roll up from the plate, owing to the fact that only the printing-side of the paper is moistened and also to the fact that the expansion due to the moistening is different along and across the paper fibres on this surface (fig. 2) : for this reason the printing-press must be provided with some device to keep the sheet flat against the printing-plate during the process of printing. After a number of trials there have been fitted immediately above the printing-table on the press one narrow steel cylinder in front of the topmost printing cylinder and one behind it (fig. 3).

The outer blanket of the " packing " is stretched outside these small cylinders and, in the course of printing, thereby presses down the nearest edges of the somewhat rolled-up sheet against the printing plate (fig. 4) ; the back part of the sheet is held flat by hand.

The effect of the moistening on the chart-picture, in the experiments made, is shown by the following data (fig. 5).

| Nr<br>№ | Dimensions of engraved surface of the plate<br>*Dimensions de la surface gravée de la plaque* | | Dimensions of engraved surface of dried chart<br>*Dimensions de la surface gravée de la carte séchée* | | Difference<br>*Difference* | |
|---|---|---|---|---|---|---|
| | Length – *Longueur* | Width – *Largeur* | Length – *Longueur* | Width – *Largeur* | Length – *Longueur* | Width – *Largeur* |
| 65 | 1035,9 m.m. | 690,9 m.m. | 1034,2 m.m. | 689,3 m.m. | 1,7 m.m. | 1,6 m.m. |
| 6 | 1035,4 m.m. | 690,4 m.m. | 1033,7 m.m. | 689,1 m.m. | 1,7 m.m. | 1,3 m.m. |
| 24 | 950,9 m.m. | 688,2 m.m. | 949,4 m.m. | 696,5 m.m. | 1,5 m.m. | 1,7 m.m. |
| 132 | 1030,3 m.m. | 696,3 m.m. | 1028,6 m.m. | 694,5 m.m. | 1,7 m.m. | 1,8 m.m. |
| 78 | 729,5 m.m. | 532,3 m.m. | 728,1 m.m. | 531,– m.m. | 1,4 m.m. | 1,3 m.m. |
| 71 | 715,4 m.m. | 514,7 m.m. | 714,7 m.m. | 513,5 m.m. | 1,1 m.m. | 1,2 m.m. |

FIG. 5

Thus the experiments gave as a result a substantially smaller change in dimensions than that given by the use of the wet method. On the average that change has been found to amount to 0.17% in the length and 0.26% in the width, that is to say, one-fifth and one-tenth part respectively of that which was caused by the use of the wet method.

The experiments carried out down to the close of November 1926 led to the abandonment of the wet method. Up to that time water exclusively had been used for the moistening of the paper. In December 1926, the experiments

were extended so as to comprise trials with a suitable moistening liquid. At first a borax solution was used which, as being soft, might be expected to exert a favourable influence on the paper. It was found, however, that borax injured the sizing on the paper. Thus the result proved to be negative.

The experiments were continued, however, with other liquids, which were regarded as likely to cause smaller changes in dimensions than water. In this connection, however, it was impossible to take into consideration intensely acid or alkaline substances, because they have an injurious effect on paper.

Substances which were more or less chemically indifferent were the only suitable ones. Trials were made with spirit, benzine and paraffin, and all turned out comparatively well. But spirit is too dear for the purpose, and benzine is too volatile to admit of regular moistening. Paraffin proved to be the most suitable. But all these substances have the drawback of being inflammable. It can surely not be impossible to find a suitable organic substance which lends itself to moistening purposes without being burdened with the disadvantages just mentioned.

Further experiments were directed towards producing a liquid of a suitable composition. During the year 1928 these experiments led to a result that must be characterised as good and which has not been excelled since. The liquid which has thus been found most suitable so far has the following composition (fig. 6) : —

COMPOSITION OF MOISTENING-LIQUID
*COMPOSITION DU LIQUIDE À HUMECTER*

| | | |
|---|---|---|
| 8000 | GRAM | WATER / *EAU* |
| 250 | » | COMMON SALT / *SEL COMMUN* |
| 25-50 | » | POTASH-ALUM / *ALUN DE POTASSE* |
| 800-1000 | » | GLYCOSE / *GLYCOSE* |

FIG. 6

This liquid is produced in the following manner. The alum and the common salt are melted in half a litre of boiling water, after which glycose is added and the whole is stirred while the water is cooling. This solution is stirred into the water, after which the mixture is ready for use. The investigations that have so far been carried out have clearly shown that the use of this liquid offers the following advantages over ordinary water : —

1. The moistening of the sheet of paper is followed by a far smaller expansion.

2. Alum improves the properties of the paper. It strengthens the glaze by coagulating the size still more completely. The strengthening of the glaze makes the paper more resistant to the effect of atmospheric humidity. Moreover, it is easier to make corrections on the paper thus prepared.

Some extracts (figs. 7 and 8) from the diary which has been kept in the printing works ever since December 1926, and the following two graphs (figs. 9 and 10), will probably illustrate the experiments better than words :—

Chart nr 30 printed 7 August 1928
*Carte n° 30 imprimée le 7 Août 1928*

Printing surface of paper moistened with alum-water
*Surface à imprimer du papier humectée avec de l'eau d'alun*

| Dimensions of engraved surface of the plate *Dimensions de la surface gravée de la plaque* | | Dimensions of engraved surface of dried chart *Dimensions de la surface gravée de la carte séchée* | | Difference *Difference* | |
|---|---|---|---|---|---|
| Length – *Longueur* | Width – *Largeur* | Length – *Longueur* | Width – *Largeur* | Length – *Longueur* | Width – *Largeur* |
| 1028,55 m.m. | 690,5 m.m. | 1027,9 m.m. | 690,3 m.m. | 0,65 m.m. | 0,2 m.m. |
| –„– | –„– | 1027,9 m.m. | 690,3 m.m. | 0,65 m.m. | 0,2 m.m. |
| –„– | –„– | 1027,7 m.m. | 690,3 m.m. | 0,85 m.m. | 0,2 m.m. |
| –„– | –„– | 1027,9 m.m. | 690,0 m.m. | 0,65 m.m. | 0,5 m.m. |
| –„– | –„– | 1027,9 m.m. | 690,1 m.m. | 0,65 m.m. | 0,4 m.m. |

FIG. 7

| Method of moistening paper *Methode d'humectation du papier* | Chart-plate nr *Plaque n°* | Dimensions of engraved surface of the plate *Dimensions de la surface gravée de la plaque* | | Dimensions of engraved surface of dried chart *Dimensions de la surface gravée de la carte séchée* | | Difference *Difference* | |
|---|---|---|---|---|---|---|---|
| | | Length – *Longueur* | Width – *Largeur* | Length – *Longueur* | Width – *Largeur* | Length – *Longueur* | Width – *Largeur* |
| Moistening all through *Mouillage complet* | 53 | 1031,5 m.m. | 695,9 m.m. | 1022,5 m.m. | 680,3 m.m. | 9,0 m.m. | 15,6 m.m. |
| Superficial moistening with water *Humectation à l'eau* | 53 | 1031,5 m.m. | 695,9 m.m. | 1030,5 m.m. | 694,75 m.m. | 1,3 m.m. | 1,15 m.m. |
| Superficial moistening with alum-water *Humectation à l'eau d'alun* | 53 | 1031,5 m.m. | 695,9 m.m. | 1030,8 m.m. | 695,3 m.m. | 0,7 m.m. | 0,6 m.m. |

FIG. 8

The shrinkage of the chart-picture in the chart amounts, on an average, to 0.07% in the length and to 0.04% in the width.

GRAPH, SHOWING DIFFERENT DISTORSION OF CHART WHEN USING DIFFERENT MOISTENING METHODS

*GRAPHIQUE REPRESENTANT LES DIFFERENSES DANS LA DEFORMATION DES CARTES SELON LES DIFFERENTS METHODES DE MOUILLAGE*

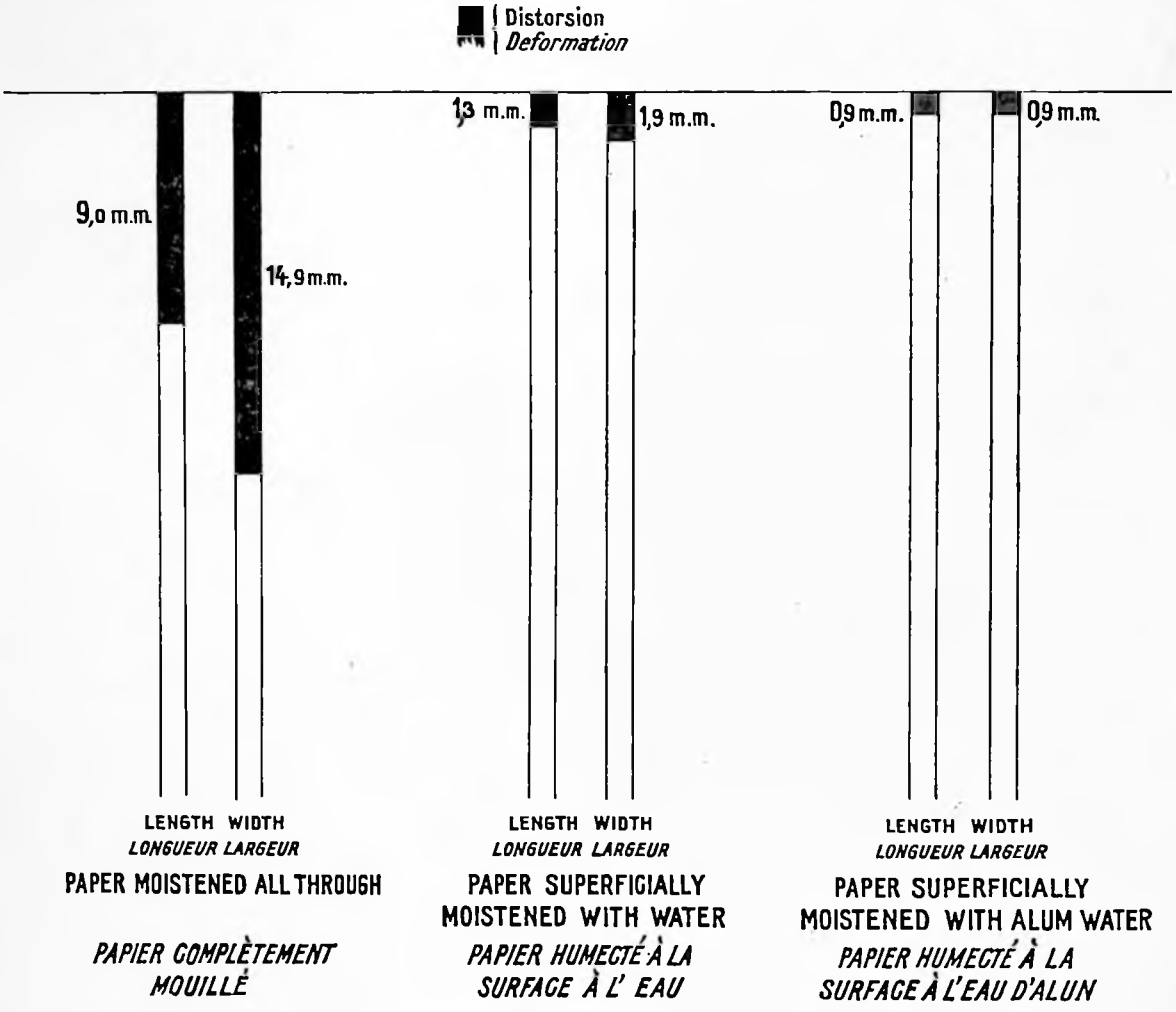



FIG. 9

GRAPH, SHOWING THE DISTORSION OF CHARTS AFTER PRINTING, FOR DIFFERENT MOISTENING METHODS

*GRAPHIQUE REPRÉSENTANT LA DÉFORMATION DES CARTES IMPRIMÉES, POUR LES DIFFÉRENTS MÉTHODES DE MOUILLAGE*

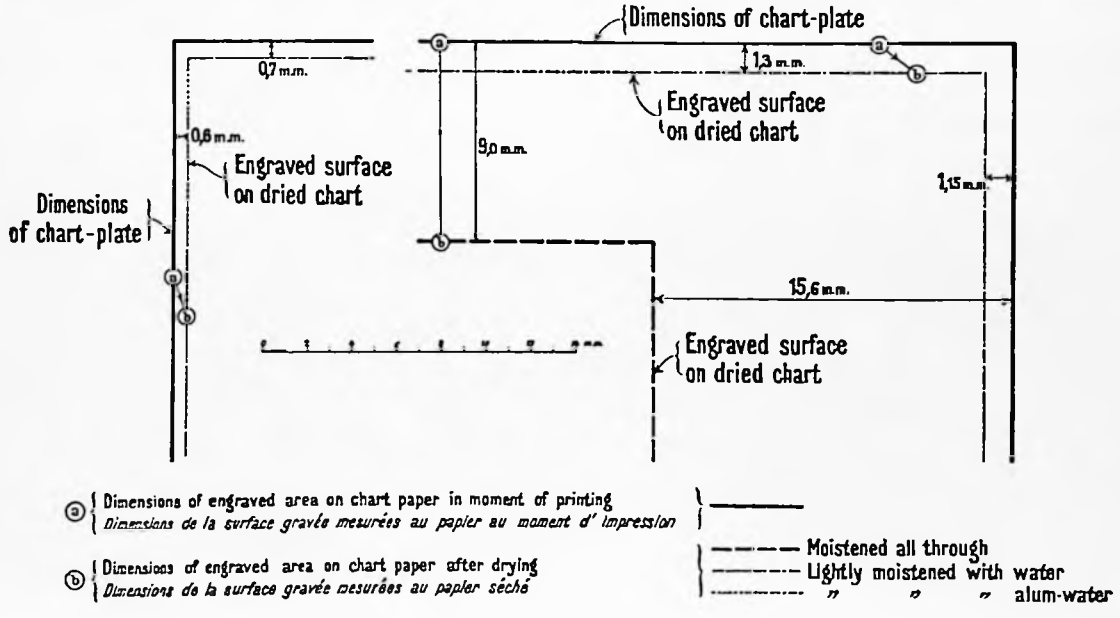



FIG. 10

The last two impressions of Chart 53 were taken on the same day and under conditions which were exactly similar in all respects.

An examination of the relation between longitudinal and latitudinal shrinkage yields the following results : —

| Moistening all through *Mouillage complet* | Superficial moistening with water *Humectation à l'eau* | Superficial moistening with alum-water *Humectation à l'eau d'alun* | Superficial moistening with concentrated alum-water *Humectation à l'eau d'alun concentrée* |
|---|---|---|---|
| 2.1 mm | 2.1 mm | 1.4 mm. | 1.2 mm |

It is evident that the amount of water that is supplied to the paper is of great importance for the absolute measures. Nevertheless, the relation between longitudinal and latitudinal shrinkage is not affected by the amount of water. On the other hand, that relation is very highly affected by the addition of foreign substances. The same proportional chart-figure was obtained both on complete wetting and on moistening only one surface of the sheet with pure water ; but the stronger the alum solution that was used, the smaller became the ratio between longitudinal and latitudinal shrinkage. The change in the dimensions of the chart-picture with the use of alum solution, measured by angular measure, amounts to only 1/75 of the change that is caused by the wet method.

In order to obtain good and sharp impressions by this method, which I might venture to call the "half-dry method", it has been necessary to increase somewhat the pressure in the printing-press. In order to find out whether this increasing pressure might possibly bring about a gradual change in the dimensions of the copperplate, a number of trials have been made, that may perhaps be of interest.

The prime object of these tests was to measure the pressure, in kg/cm², in the printing of charts by both the older (wet) method and by the new (half-dry) method. For this purpose there was used a hydraulic press (fig. 12) with an electrically-driven pump with highest practicable working-pressure of 87.0 tons. The copperplate used, a cold-rolled chart copperplate, had a surface of 2209 cm² (470 × 470 × 2.3 mm.); and consequently the highest load could amount to 39.4 kg/cm². As the plate was calculated to bear a pressure of 2400 kg/cm² without the risk of any change in shape, there was thus a seventy-fold margin of security.

The copperplate was laid on a sheet of iron 20 mm. thick and under the upper printing-surface of the press there were fixed blankets and a sheet of pasteboard arranged in the usual way for the different methods of chart-printing. Colour was applied to the plate as usual, and both entirely wet and moistened chart-paper were used for the purpose of comparison between the different methods of printing. The printing was begun with a load of 4.8 kg/cm² on the plate, and this load was gradually increased to 33.2 kg/cm² for completely wet sheets and 37.4 kg/cm² for moistened sheets. Clear chart impressions were obtained.

This test showed that under normal conditions there was no risk whatever of the deformation of the plates, as the highest pressure required is only one or two per cent, of that which is needed for a permanent deformation of the copperplate.

The test also showed that the increase of pressure that was demanded in the use of the " half-dry method " in comparison with the " wet method " amounts to only about 10%. In most cases an even smaller increase would seem to be adequate.

In order to check the values obtained in this test-printing, which was carried out at the note-printing press of the Bank of Sweden, further tests were made with the same copperplate on one of the presses of the Hydrographic Service (fig. 13). There seemed to be a possibility, in fact, that a momentarily greater pressure, involving danger for the condition of the plate, might appear at the very moment when the foremost edge of the plate comes under the cylinder.

In order to check the load, the tightening screws for the cylinder were thrown out of gear. Instead of them the press had been provided with two levers, the outer ends of which were loaded with weights. In addition to the load applied, the printing-plate was exposed to the weight of the printing cylinder with its cogwheel, levers and a number of other devices for the test.

### A. *PRINTING WITH COMPLETELY WET PAPER.*

The printing was carried out with 4 blankets on the cylinder. The first trial was made with an extra load of 320.4 kgs. The resultant impressions proved to be indistinct, and consequently the load was increased by five stages up to 414.8 kgs when quite good impressions were obtained. At that time the load corresponded to a pressure of 35.4 kg/cm². At the note-printing press of the Bank of Sweden quite good impressions were obtained with completely wetted paper at a pressure of 33.2 kg/cm² (fig. 14).

### B. *PRINTING WITH MOISTENED PAPER.*

The printing was carried out against two blankets and a sheet of pasteboard — that is to say, with the use of the same packing as in ordinary printing. Eight impressions were taken with a gradual increase in the load. Quite good impressions were obtained when the load amounted to 433 kgs, i. e. at a pressure of 37.1 kg/cm². The corresponding figure at the note-printing press of the Bank of Sweden was 37.4 kg/cm² (fig. 14).

In order to attain certitude as to the capacity of galvanically-deposited copperplates to resist pressure without any change whatever in shape, com prehensive printing tests were also made at the BOLINDER'S engineering workshops in Stockholm.

In these tests there was used a small hydraulic press, which was pumped by hand and which could produce a maximum pressure of 31.4 tons. In the test there was used a galvanic plate, specially made in the Hydro graphic Office for the purpose, with an area of 347 cm². The water pressure could be brought up to a little over 100 kg/cm². The load on the plate was

gradually increased from 25 kg/cm² up to 90.8 kg/cm², during which process control measurements were repeatedly made with micrometers as to length, breadth and thickness, but no measurable change of shape could be observed

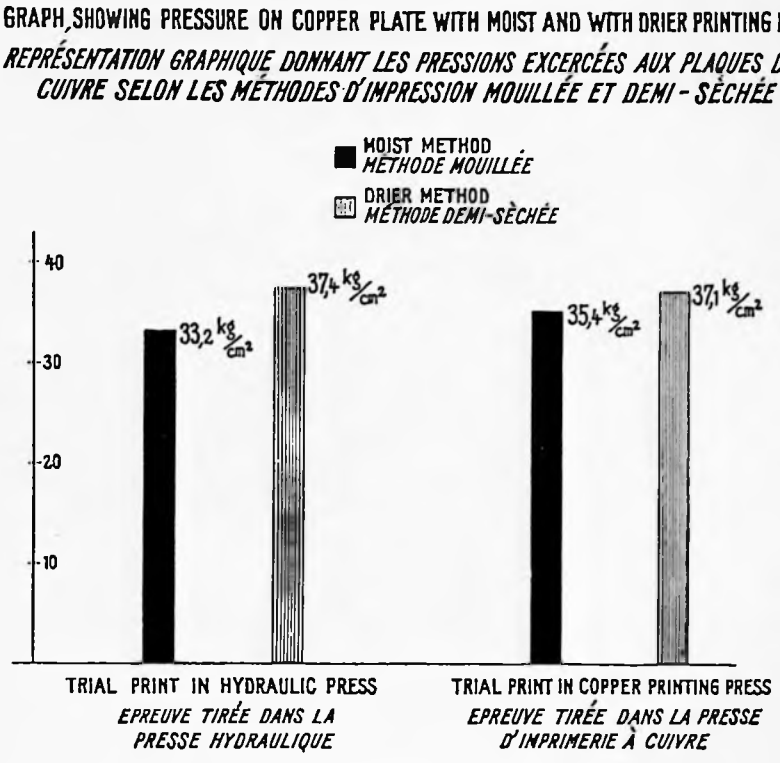



Fig. 14

Nor could any effect on the engraving be perceived. This pressure was nearly three times as great as that commonly employed in printing charts (fig. 15).

In order to investigate still further the conditions holding good with regard to deposited copper at high pressures, small pieces were inserted in the press. One piece was exposed to a pressure of 2780 kg/cm², and here a minor deformation could be established. This pressure is nearly 80 times greater than that required for printing charts.

A still smaller piece of copper was inserted, so that the pressure could be brought up to 4040 kg/cm². In this case the copperplate was crushed from 3.25 mm. to 2.90 mm., i.e. 0,35 mm., which means a diminution in thickness of 11%. The strain was now 115 times greater than that which occurs in ordinary printing.

These tests show that galvanically-deposited copper can attain very high resistance values, and that no risk whatever of the destruction of the plates by deformation can really arise with this method of printing charts. Nor does a threefold rise of the pressure exercise any influence whatever on the engraving on the plate (fig. 15).

Quite recently experiments have been made with the use of entirely dry paper and moistening the chart plate itself instead of the paper. This has given a fine impression. The shrinkage after the drying of the chart has been

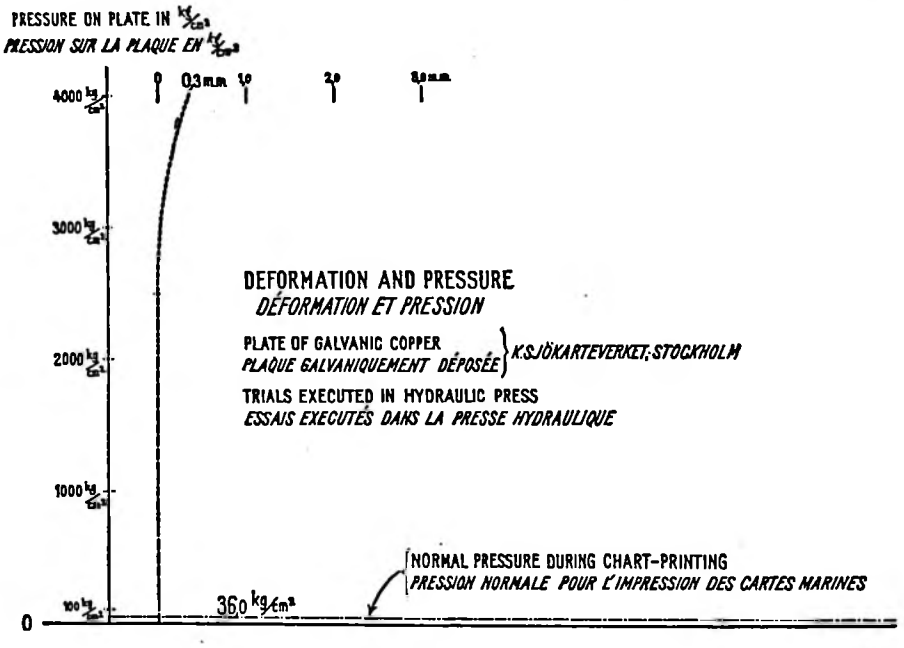



FIG. 15

measured and estimated at only 0.2 mm. in the length and just the same in the breadth. The difficulties involved in this method are, first, the correct adjustment of the sheet of paper and, second, an even moistening of the plate If these difficulties can be overcome by some suitable device, it would seem possible that this method might supply the best solution of the problem.

# C DOCUMENTS PRESENTED to the CONFERENCE.

## BY THE DIFFERENT DELEGATIONS AND BY THE INTERNATIONAL HYDROGRAPHIC BUREAU.

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### Documents presented by the German Delegation.

— Conférence du Dr. Maurer sur le Sondage par le Son (tirage autographique) texte allemand et traduction française. (See page 395).

— Beschreibung eines bifilar aufgehangten, an Bord elektrisch registrierenden Strommessers. *
Par : Dr. H. Rauschelbach.

— Strommesser nach Rauschelbach - Ozean 1.
Askania-Werke A. G. Bambergwerk, Berlin-Friedenau. *

— Projet de carte aéronautique maritime.

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### Documents presented by the Delegation of the United Sates of America.

U.S. Coast and Geodetic Survey Special Publications N$^{os}$ :

— 23 The U.S. Coast and Geodetic Survey.

— 118 J.H. Hawley - Construction and operation of the wire drag and sweep.

— 135 H.A. Marmer - Tidal Datum planes.

— 139 G.T. Rude - Instructions for tide observations.

— 143 J.H. Hawley - Hydrographic Manual.

— 146 Radio-Acoustic Position Finding.

— 147 J.H. Service - Measurement of Salinity of Sea-Water.

— Standard symbols adopted by the Board of Surveys and Maps of the United States of America.

— Aeronautical Charts.

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* These documents will be reproduced in the *Hydrographic Review*.

## Documents presented by the French Delegation.

— La détermination récente d'un Réseau Mondial de Longitudes fondamentales, par A. Gougenheim, Ingénieur-hydrographe. (Revue Hydrographique, Vol. V. N° 2).

— Cartes aéronautiques maritimes.

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## Documents presented by the Greek Delegation.

— Notice décrivant l'Azimutomètre (instrument donnant automatiquement l'azimut astronomique d'un astre) par l'Enseigne de Vaisseau P. Damilatis, de la Marine Hellénique. *

— Graphique en couleurs donnant les physionomies des principaux caractères des phares.

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## Documents presented by the Japanese Delegation.

— Address delivered by Rear Admiral Suyeki Yonemura. (See page 126).

— On the form of Japan Trench.

— Brief note on Oceanographical Works carried on by the Hydrographic Department of the Imperial Japanese Navy. (The Drift of Bottles, 10th Report).

— Results of Oceanographical Investigations on the Kurosio (Japan current) by the data obtained from the Japanese naval surveying ships and other Japanese sources.

— On the form Adjacent Seas of Japan.

— On the " Nippon Suirobu Magnetometer " - by Asaiti Muramoto, Naval Engineer, I.J.N.

— Tables for Short Method of Astronomical Navigation — by Sinkiti Ogura, Naval Engineer, I.J.N.

— Outline of the Oceanographical works carried on by the Hydrographic Department of the Imperial Japanese Navy in the recent years - by Rear-Admiral S. Yonemura, Director of Hydrographic Department, I.J.N.

— Hydrogen-Ion Concentration of Sea-Water in the southwestern portion of the North-Pacific - by Kôiti Itô.

— Preliminary Report on Marine Deposits in the southwestern portion of the North-Pacific - by Shôshiro Hanzawa.

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* These documents will be reproduced in the *Hydrographic Review.*

— Chart of Tidal Current in the Naikai.

— Charts for position plotting (Japanese Hydrographic Chart N° 6037-I to II) - for use of I.H.B.

— Report on the Decision of the previous Hydrographic Conferences adopted in Japan.

— Discussion in regard to the differences of the Meridional parts with reference to various systems of the terrestrial spheroide.

— The Average velocity of sound in Sea-Water for the deep-sea echo-soundings in the adjacent seas of Japan, by Asaiti Muramoto, Naval Engineer, I.J.N., (Hydrographic Bulletin N° V, 1929).

— An example of the way in which a swept area (Sôkai-Kuiki) is indicated in Japanese charts.

— » » dredged depths (Syunsetu-suisin) » »

— Table of agreed and proposed symbols for charts.

— » » » » for aviation charts.

— Sketch of recommended tracks for the North Pacific Ocean, by Admiral S. Yonemura.

— Cartes montrant les lignes de niveau proposées par le B.H.I.

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## Documents presented by the Portuguese Delegation.

— Metodos Rapidos de Navegaçâo aera - o sextante Gago Coutinho. *

— Tabelas de Marés do Porto de Macau - 1929.

— Listes des Instructions Nautiques originales du Portugal et des Colonies Portugaises.

— Lista de Farois, Boias luminosas, sinais de nevoeiro publicada pela Direcçâo de Farois - 1929.

— Relatorio do Levantamento Hidrografico da Barra e Porto do Chinde - 1925.

— Cartas, Publicaçôes e Instrumentos nauticos de que devem ser munidas as embarcaçôes que vâo para o mar - 1927.

— Catàlogos das Cartas - (Ministerio das Colonias) - 1926.

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* These documents will be reproduced in the *Hydrographic Review*.

## Documents presented by the International Hydrographic Bureau.

— Supplement to Proposals made. (Embodied in Proposals, page 51).

— Supplementary Report on Work of the Bureau. (Embodied in Report on Work of the Bureau, page 19).

— Annual Report for 1928.

— Special Publications of the International Hydrographic Bureau N° 23, 24 and 25.

— Cdt TONTA. — Notes and Tables on Polar Cartography. **

— Cdt TONTA. — The Radio-Acoustic Position by three time intervals.**

— Historical Cards on P.D. and E.D. dangers. (Supplement to Special Publication N° 20).

— Limits of Oceans and Seas. (Special Publication N° 23).

— Uniformity in Symbols of Coastal Aviation Charts. *** (A[1] Niblack).

— General Bathymetric Chart of the Oceans.

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** See Hydrographic Review, Vol. VI, N° 1.

*** See Hydrographic Review, Vol. V, N° 2.

# D. LIST OF INSTRUMENTS EXHIBITED DURING THE CONFERENCE.

An exhibition of instruments took place during the Conference in premises kindly lent for that purpose by the " Société des Bains de Mer ". The following were the principal instruments exhibited : —

— Echo-Sounding apparatus by the *Behm Echolot Gesellschaft* of Kiel ;

— a complete Echo-Sounding Apparatus by the *Atlas Werke* of Bremen;

— a Langevin-Florisson Ultra-Sonic Optical Analyser constructed by the *Société de Condensation et d'Applications Mécaniques,* of Paris;

— Dr Rauschelbach's Current Meter, constructed by the *Askania Werke* of Berlin, also a Tide gauge;

— the Idrac Current Meter constructed by the Firm *Barbier, Bénard & Turenne,* of Paris;

— a Mill Current-meter with flexible suspension and direction indicator constructed by *Ott,* Kempten, Bavaria ;

— two *Wild* Theodolites for triangulation and general use;

— a *Wild* Telescope Level;

— a Fish-lead Sounding Machine from the Italian Hydrographic Office ;

— a Magnaghi Sextant from the Italian Hydrographic Office ;

— a model of an Azimuth Meter exhibited by the Greek Delegation.

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